ORDER NO. MD0204086C2

Service Manual

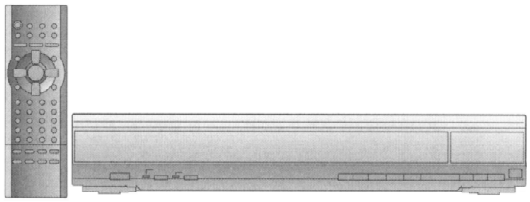
DVD/CD Player

DVD-CV52E / DVD-CV52EB / DVD-CV52EG

Colour

(K)... Black Type

(S)... Silver Type



SPECIFICATIONS

Specification	
Signal system:	PAL625/50, PAL525/60, NTSC
Operating tempurature range:	+5 to 35°C
Operating humidity range:	5 to 90% RH (no condensation)

Discs played [8 cm or 12 cm]:

(1) DVD-Video, DVD-R (DVD-Video compatible)

(2) CD-Audio (CD-DA)

(3) Video CD

(4) CD-R/CD-RW (CD-DA, Video CD formatted discs)

(5) MP3

- Maximum number of tracks and groups recognizable: 999 tracks and 99 groups
- Compatible compression rate: between 32 kbps and 320 kbps

Video output:	
Output level:	1Vp-p (75 Ω)
Output terminal:	Pin jack (1 system)
S video output:	
Y output level:	1Vp-p (75 Ω)
C output level:	NTSC; 0.286 Vp-p (75 Ω)
	PAL; 0.300 Vp-p (75 Ω)

Output terminal:	**S terminal (1 system)/AV**
RGB video output:	
R output level:	**0.7Vp-p (75 Ω)**
G output level:	**0.7Vp-p (75 Ω)**
B output level:	**0.7Vp-p (75 Ω)**
Output terminal:	**AV (1 system)**
Audio output:	
Output level:	**2Vrms (1kHz, 0dB)**
Output terminal:	**Pin jack/AV**
Number of terminals:	
2ch:	**1 system**
Subwoofer output (0.1ch):	**1 system**
Audio performance:	
(1) Frequency response:	
● DVD (linear audio):	**4Hz-22kHz (48 kHz sampling)** **4Hz-44kHz (96 kHz sampling)**
● CD audio:	**4Hz-20kHz**
(2) S/N ratio:	
● CD audio:	**115dB**
(3) Dynamic range:	
● DVD (linear audio):	**102dB**
● CD audio:	**98dB**
(4) Total harmonic distortion:	
● CD audio:	**0.0025%**
Digital audio output:	
Optical digital output:	**Optical terminal**
Pickup:	
Wave length:	**658nm/790nm**
Laser power:	**CLASS 2/CLASS 1**
Power supply:	**AC 220-240 V, 50 Hz**
Power consumption:	**14 W**
Dimensions:	**430 (W) x 406.5 (D) x 75.8 (H) mm**
Mass:	**4.5kg**

Power consumption in standby mode: approx. 3.8 W

Note:

1. Specifications are subject to change without notice.
Mass and dimensions are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C1011 & C1012 through a 10 Ω, 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at AC 230V, 50Hz in NO SIGNAL mode should be ~120 mA .

2. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. **Immediately before handling any semiconductor component or semiconductor-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.**
2. **After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.**
3. **Use only a grounded-tip soldering iron to solder or unsolder ES devices.**
4. **Use only an anti-static solder remover device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge to damage ES devices.**
5. **Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.**
6. **Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or**

comparable conductive material).

7. **Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.**

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

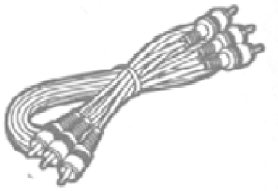
8. **Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).**

IMPORTANT SAFETY NOTICE

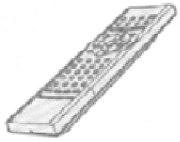
There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3. Accessories

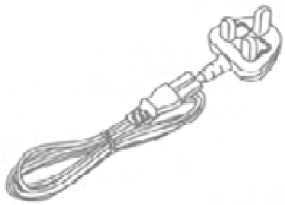
Audio/Video Cable



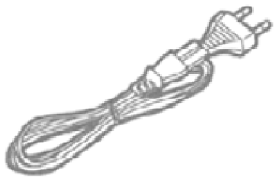
Remote Control



AC mains lead (For EB only)



AC mains lead (for E & EG only)



4. Precaution of Laser Diode

Caution :

This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens. / Wavelength : 658 nm/ 790nm / Maximum output radiation power from pick up : 100 μ W/VDE / Laser radiation from pick up unit is safety level, but be sure the followings:

1. **Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.**
2. **Do not adjust the variable resistor on the pick up unit. It was already adjusted.**
3. **Do not look at the focus lens using optical instruments.**
4. **Recommend not to look at pick up lens for a long time.**

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt. / Wellenlänge : 658nm/ 790nm / Maximale Strahlungsleistung der Lasereinheit :100 μ W/VDE / Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

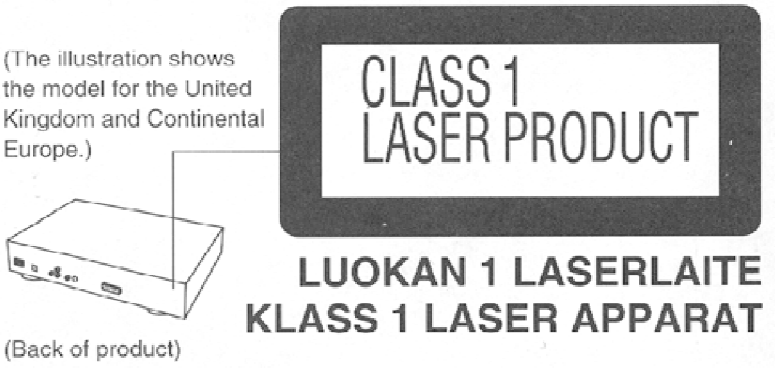
1. **Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.**
2. **Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.**
3. **Nicht mit optischen Instrumenten in die Fokussierlinse blicken.**
4. **Nicht über längere Zeit in die Fokussierlinse blicken.**

ADVARSEL: I dette a apparat anvendes laser.

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN TH
SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ **Use of Caution Labels**



5. Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

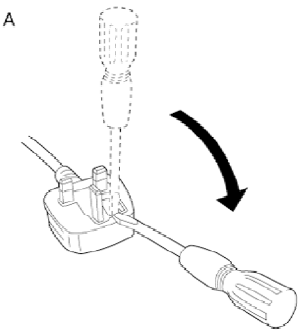
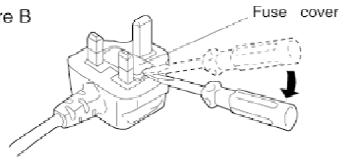


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

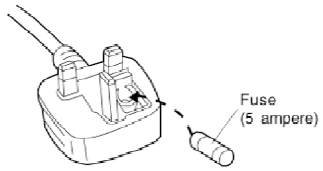
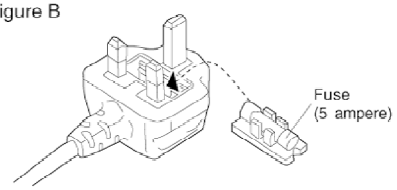


Figure B



6. Handling Precaution for Traverse Deck

The laser diode in the optical pickup may break down due to potential difference caused by static electricity of clothes or human body.
So be careful of electrostatic break down during repair of the optical pickup.

6.1. Handling of optical pickup

1. **Do not subject the optical pickup to static electricity as it is extremely sensitive to electrical shock.**
2. **Cut the optical unit FPC at the point as shown when replacing a new optical unit. When removing or connecting the short pin,**

finish the job in as short time as possible.

3. **Take care not to apply excessive stress to the flexible board (FPC).**
4. **Do not turn the variable resistor (laser power adjustment). It has already been adjusted.**

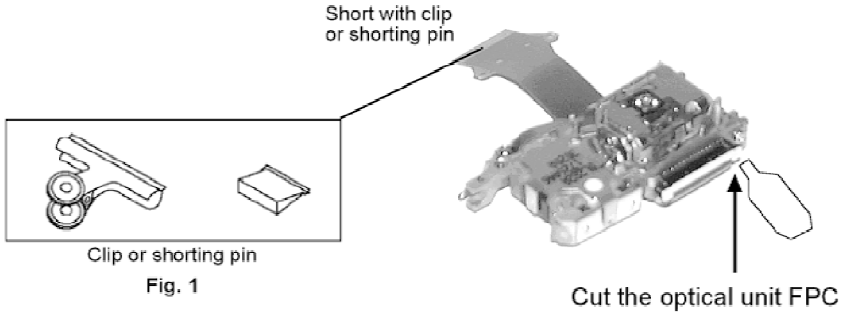


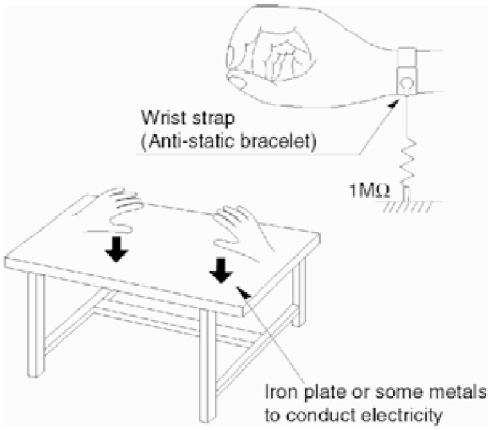
Fig. 1

6.2. Grounding for electrostatic breakdown prevention

1. **Human body grounding**
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. **Work table grounding**
   Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



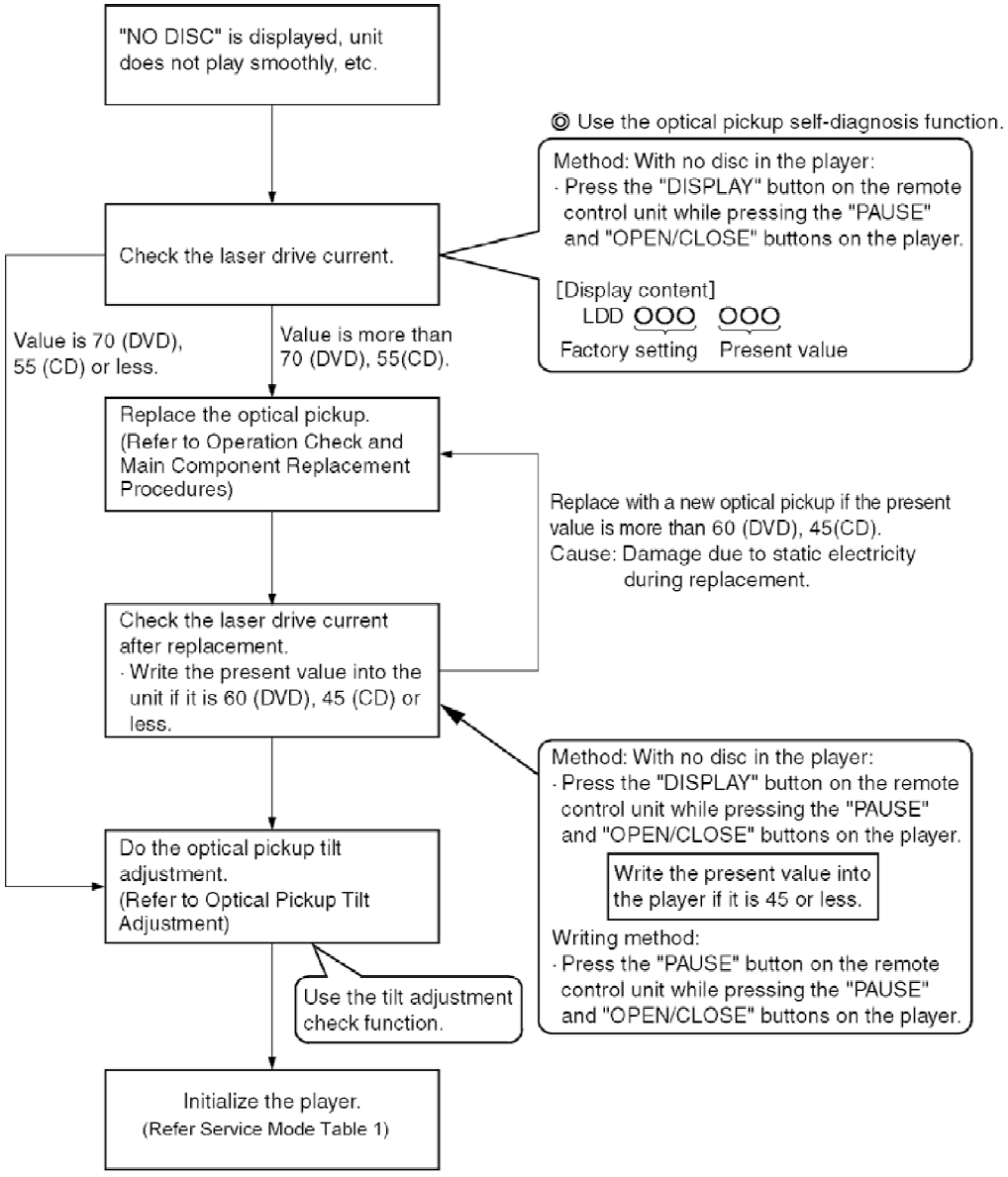
7. Optical Pickup Self-Diagnosis and Replacement Procedure

The optical pickup self-diagnosis function and tilt adjustment check function have been newly added to this player. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment.

Be sure to use the self-diagnosis function before replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

Note

Press the power button to turn on the power and check the value before the unit warms up (within three minutes).



8. Self-Diagnosis Function and Service Mode

8.1. Servicing method for DVD player (5th generation models)

With the 5th generation models new self-diagnosis function and new servicing method described below are additionally available.

8.1.1. Firmware updating and recovery with disc

- Recovery

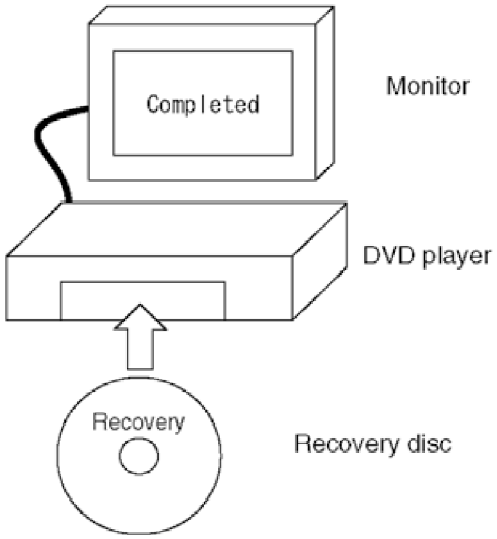
- Firmware updating

Simply run the recovery disc. Then both of the above operations are automatically performed.

Commercially available CD-R can now perform updating and recovery process, making it easier to update the version.

Recovery process: Optimization of player after replacement of FROM, EEPROM and modular P.C.B.

Version updating: Firmware updating for improved operability and performance.



8.2. How to use recovery disc

8.2.1. Performing recovery

1. **Load the recovery disc RFKZD5TR006 SPC on to the player and run it.**
2. **Recovery is performed automatically. When it is finished, a message appears on the screen.**
3. **Press “Disc Exchange” button.**
4. **Remove the recovery disc.**
5. **Turn off the power.**

8.2.2. Updating firmware

1. **Load the recovery disc RFKZD5TR006 SPC on to the player and run it.**
2. **Firmware version of the player is automatically checked. Approriate message appears whenever necessary.**
3. **Using remote controller's cursor key, select whether version updating is to be done or not. (selection of Yes/No)**
4. **a. If Yes is selected, version updating is performed.**
   b. If No is selected, only recovery is performed.
5. **a. When updating is finished, remove the disc according to the message appearing on the screen.**
   b. Remove the disc according to the message appearing on the screen. (Press "Disc Exchange" button to eject the tray).
6. **Turn off the power.**

8.3. Overview of each function

8.3.1. Cumulative operation time display

1. **Operation/display**

DVD/CD laser operation time
Unit: 10 hours in decimal notation

Spindle motor operation time
Unit: 10 hours in decimal notation

Note: You may have to press the "FL select" button on the remote control to view the remaining text when the text is too long to display on the FL at one time.
Key operations are as follow:
Laser operation time ..... In STOP mode, main unit PAUSE+FWD -SKIP+ remote controller [5]
Spindle motor operation time ..... In STOP mode, main unit PAUSE+FWD-SKIP+ remote controller [6]
To reset the timer, perform the following while displaying the time with above key operation.
Laser operation time ..... In STOP mode, main unit STOP+FWD-SKIP+ remote controller [5]
Spindle motor operation time ..... In STOP mode, main unit STOP+

FWD-SKIP+ remote controller [6]

2. How to utilize

Reference information in fault diagnosis of laser or spindle motor system.

Review of fault point in repeated repair

8.3.2. Servo process display

1. Operation/display

While the player is in STOP mode, perform the specified key operation to display the servo process number on FL.

When the display does not change from the error indication, press Open/Close key to show the servo process number.

Key operation: In STOP mode, main unit PAUSE+FWD- SKIP+ remote controller [7].

Number to the left ..... Process number when halted
Number to the right ..... Process number in progress

8.4. Service Mode Table 1

The service modes can be activated by pressing various button combination on the player and the remote control unit.

Player buttons	Remote control unit buttons	Application	Not
PAUSE + OPEN/ CLOSE	0	Displaying the UHF display F _ _ _	Refer to sec Self-Diagno Function (U Display)
	5	Jitter check, tilt adjustment *Display show J_xxx_yyy_zz “yyy” and “zz” shown to the right have nothing to do with the jitter value. “yyy” is the error counter, while “zz” is the focusdrive value. Refer to Section 10.4. for Optical Pickup Tilt Adjustment Procedure.	Refer to Sec 13.4. Optica Tilt Adjustm
	6	Checking the region numbers and broadcast system	
	7	Checking the program version	Check the I FLASH ROM program.
	9	Lighting Confirmation Function of Display Tube	
	DISPLAY	Checking the laser drive current	Refer to Sec Optical Pick Replacemer Procedure
	PAUSE	Writing the laser drive current value after replacing the optical pickup (do not use for anything other than optical pickup replacement)	

Player buttons	Remote control unit buttons	Application	Not
PAUSE SKIP/SEARCH<< with Power off condition	0	Changer mechaless mode Playback without Changer mechanism	No display “welcome”
PAUSE SKIP/ SEARCH<< OPEN/CLOSE		Initializing the DVD player (restoring factory preset settings)	

8.5. DVD Self-Diagnosis Function-Error Code

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	I
	U, H error					
U11	Focus error					
H01	Tray loading error					
H02	Spindle servo error	(Spindle servo, DSC SP motor, CLV servo error)				
H03	Traverse servo error					
H04	Tracking servo error					
H05	Seek error					
H06	Power error	Cannot switch off the power because of the panel and system computer communication error				
	DSC related					
F500	DSC error	DSC stops in the occurence of servo error (startup, focus error, etc)	OPU	ADSC	FEP	s c
F501	DSC not Ready	DSC-system computer communication error (Communication failure caused by idling of DSC)	ADSC	CPU		
F502	DSC Time out error	Similar disposal as F500	OPU	ADSC	FEP	s c
F503	DSC communication Failure	Communication error (result error occured although communication command was sent)	ADSC	FEP	EEPROM	
F505	DSC Attention error	Similar disposal as F500	OPU	ADSC	FEP	s c
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc	DISC	FEP	ADSC	C
	ODC related					
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect	ODC	FEP	ADSC	
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data	ODC	FEP	ADSC	
F602	Access failure to LEAD IN caused by demodulation error	LEAD IN data unreadable				

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	I
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc				
F610	ODC abnormality	No permission for command execution	ODC			
F611	6626 QCODE don't read error	Access failure to seek address in CD series	ODC			
F612	No CRC OK for a specific time	Access failure to ID data in DVD series	ODC			
F630	No reply to KEY DET enquiry	(for internal use only)				
F631	CPPM KEY DET is not available till the FILE terminal	(CCPM file system in unreadable caused by scratches)	DISC	CPPM		
F632	CPPM KEY DET is not available	Been revoked or falsified	DISC	EEPROM	CPPM	
	Disc Code					
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display	DISC			
	HIC Error					
F4FF	Force initializing failure (Time out)		EEPROM	CPU	FEP	A
	Micro computer error					
F700	MBX overflow	When replying message to disc manager				
F701	Message command does not end	Next massage is sent bafore replying to disc manager				
F702	Message command changes	Message is changed before it is sent as a reply to disc manager				
F880	Task number is not a appropriate	Message coming from a non-existing task				
F890	Sending message when message is being sent to AV task	Sending message to AV task				

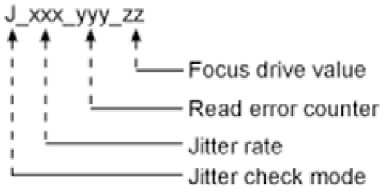
Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3	I
F891	Message couldn't be sent to AV task	Begin sending message to AV task				
F893	FROM falsification		FROM	CPU		
F894	EEPROM abnormality		EEPROM	Serial communication on lone		
F895	Jumper Error	abnomal combination of the FROM and Jumper not fit the Language and firm	FROM	Jumper		
F896	Jumper Error	No existing model cannot find the Setup Table	Jumper			
F897	No Initialized					
F8A0	Message command is not appropriate	Begin sending messgae to AV task				

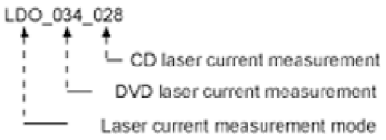
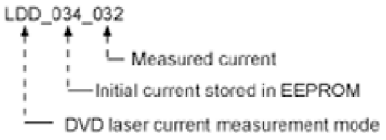
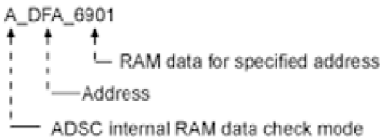
8.6. Last Error Code saved during NO PLAY

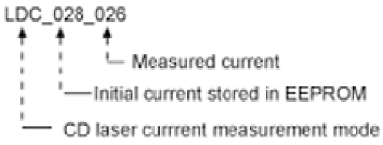
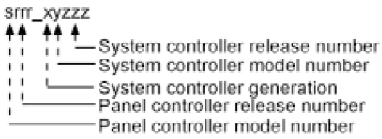
Error Code	Error Content	System computer	Setting task	System computer i error code
F0BF	6) Cannot playback because physical layer is not recognizable	PCND_NOPLAY PHYSICAL 0x50	DriveManager	0xDOBF
F0C0	8) DVD: Cannot playback because it is not DVD Video/Audio/ VR	PCND_NOPLAY VIDEO 0x70	DiscManager	0xDOC0
F0C1	9) DVD Prohibited by the restricted region code	PCND_NOPLAY RCD 0x80	DiscManager	0xDOC1
F0C2	A) DVD: PAL restricted playback	PCND_NOPLAY PAL 0x90	DiscManager	0xDOC2
F0C3	B) DVD: Parental lock setting prohibits the playback of the entire title	PCND_NOPLAY PTL 0xA0	DiscManager	0xDOC3
F0C4	C) VCD: Prohibited bacause it is in PHOTO CD format	PCND_NOPLAY PHOTO CD 0xB0	DiscManager	0xDOC4
F0C5	VCD/CD: Prohibited because it is CDROM without CD-DA	PCND_NOPLAY CDROM 0xC0	DiscManager	0xDOC5

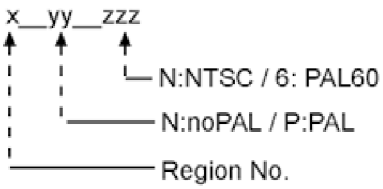
8.7. Service Mode Table 2

Pressing various button combinations on the player and remote control unit can activate the service modes.

Item	Player mode and button combination	Function	Display	Car r
Jitter check	In PLAY mode, press PAUSE and OPEN buttons on the player, and “5” button on the remote control unit.	Jitter check. Jitter check is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by mirror error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	 Jitter rate is shown in decimal notaiton to one place of decimal. Focus drive value is shown in hexadecimal notation.	Pre ST(OP but
Error code check	In ** mode, press PAUSE and OPEN buttons on the player, and “0” button on the remote control unit. * With pointing of cursor up and down on display, the panel controller switches serial number of history and sends out the command accordingly.	Error code check. The latest error code stored in EEPROM is displayed.	Error code (play_err) is expressed in the following convention. Error code= 0 xDAXX is expressed: → nn UXX Error code= 0 x BDXX is expressed: → nn HXX Error code= 0 x DXXX is expressed: → nn FXXX Error code= 0 x 0000 is expressed: → nn F--- * “nn” denotes the serial number of history.	Car aut 5 s late

Item	Player mode and button combination	Function	Display	Car r
Initial setting of laser drive current	In STOP mode, press PAUSE and OPEN buttons on the player, and PAUSE button on the remote control unit.	Initial setting of laser drive current initial current value for each of DVD laser and CD laser is separately saved in EEPROM.	 The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is switched on.	Car aut 5 s late
DVD laser drive current measurement	In STOP mode, press PAUSE and OPEN buttons on player, and DISPLAY button on the remote control unit.	DVD laser drive current measurement -DVD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when the primary power is switched off.)	 The value denotes the current in decimal notation. The above example shows the initial current is 34mA and the measured value is 32mA.	Car aut 5 s late
ADSC internal RAM data check	In ** mode, press PAUSE and OPEN buttons on the player, and RETURN button on the remote control unit.	ADSC internal RAM data check -ADSC internal RAM data is read out and displayed. / Change the address with CLEAR key operation to show the data for 11 addresses.	 The value is shown in hexadecimal notation. The above example shows the data in ADSC address DFah is 6901h.	Pre ST(OP but
Servo process display	In STOP mode, press PAUSE and FWD-SKIP buttons on the player, and “7” button on the remote control unit.	Servo process displayed. The servo process from STOP to ACCESS is displayed.	-	Tur sec pov

Item	Player mode and button combination	Function	Display	Car r
CD laser drive current measurement	In STOP mode, press PAUSE and FWD-SKIP buttons on the player, and DISPLAY button on the remote control unit.	CD laser drive current measurement. CD laser drive current measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when the primary power is switched off.)	 The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	-
Version display	In STOP mode, press PAUSE and OPEN buttons on the player, and “7” button on the remote control unit.	Version display.		Car aut 5 s late
Lighting of display tube	In ** mode, press PAUSE and OPEN buttons on the player, and “9” button on the remote control unit.	Lighting of display tube	-	Pre ST(OP but
Dealer’s lock	In STOP mode, press STOP button on the player, and POWER button on the remote control unit.	Dealer’s lock. The lock is switched ON or OFF. When dealer’s lock is ON, it prohibits switching off of the secondary power and tray opening. When the lock is switched, its ON/OFF status is stored in EEPROM.	-“LOCKED” sign appears when dealer’s lock is swiched on, or when secondary power key or tray opening key is pressed while the lock is on. -“UNLOCKED” sign appears when dealer’s lock is switched off.	Rep sar ope

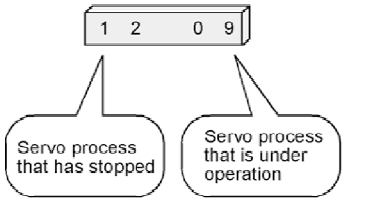
Item	Player mode and button combination	Function	Display	Car r
Initialization	In STOP mode, press PAUSE, BWD-SKIP and OPEN buttons on the player for 3 seconds or longer.	Initialization. User settings are cancelled and player is initailized to factory setting.	“INITIALIZED”	
Region display	In STOP mode, press PAUSE and OPEN buttons on the player, and “6” button on the remote control unit.	Region display		Car aut 5 s late

Item	Player mode and button combination	Function	Display	Canc me
Timer 1 check	In STOP mode, press PAUSE and FWD-SKIP buttons on the player, and “5” button on the remote control unit.	Timer 1 check. Laser operation timer. Operation time is measured separately for DVD laser and CD laser.	T1_1234_5678. Shown to the left is DVD laser time, and to the right CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. “0000” will follow “9999”’. (You may have to press the “FL select” button on the remote control to view the remaining text when the text is too long to display on the FL at one time).	Cancell automa second
Timer 1 reset	While displaying Timer 1 data, press STOP and FWD-SKIP buttons on the player, and “5” button on the remote control unit.	Timer 1 reset. Laser operation timer. Operation time of both DVD laser and CD laser is reset all at once.	T1_0000_0000. (You may have to press the “FL select” button on the remote control to view the remaining text when the text is too long to display on the FL at one time).	Cancell automa second

Item	Player mode and button combination	Function	Display	Canc me
Timer 2 check	In STOP mode, press PAUSE and FWD-SKIP buttons on the player, and “6” button on the remote control unit.	Timer 2 check. Spindle motor operation timer.	T2_1234. Time is shown in 4 digits of decimal notation in a unit of 10 hours. “0000” will follow “9999”.	Cancell automa second
Timer 2 reset	While displaying Timer 2 data, press STOP and FWD-SKIP buttons on the player and “6” button on the remote control unit.	Timer 2 reset. Spindle motor operation timer.	T2_0000	Cancell automa second

8.8. Servo Process Flow

Specification of the servo process display in the starting flow



(Restrictions)

All processes that are under operation cannot be displayed due to the limit of the processing time.

Starting flow	Range of the servo process numbers	Processing items	
		Number	Contents of each process
Start			
Initial setting Tray control	00	00	Each initial setting
TRV initial movement	01	01	TRV initial movement
Disc detection	02~08	02	Initial setting in FE system
		05	Detecting LD ON HALF
		08	Detecting CD LD ON
Disc type distinction	02~08	02	Initial setting in FE system
Focus servo	10~13	12	Focus ON
		13	FBAL adjustment
Tracking servo	14~15	15	Tracking ON
Gain learning	17	17	Gain adjustment in ADSC focus system
ID read	18~1A	19	DBAL/equalizer adjustment
		1A	ID read

8.9. Servo Process Display Mode

In starting operation of the player, a number is alloted to each servo process so that the operation of each step can be seen. The relation between the process and the displayed number are as follows:

Number allotment to the servo process

Process classification	Each processing item	Description	Proces numbe
Initial start process	Initial start	The process starts after the tray is loaded. (The state is changed to “READY” or “PREPARE”.)	0~40
	Secondary learning	Servos for the DVD-DL 1st layer and the CD-DA double speed are learned in this step.	50~7F
Restart process	Restart	When a user operates in the “READY” state, each servo is turned on.	80~9F
Seek process	Seek	The optical pickup is moved to the disc destination in this process.	A0~BF
Repair process	Recover		
	(Error check)	An error is searched in the PLAY/SEEK state.	C1~C3
	(Attention)	An error is recovered following the attention error interrupt from the S-ODC.	C4~C6
	(Q code read)	If any Q code in improperly read, reset and retry.	C7~C9
Stop process	Stop	A servo is controlled in response to the user’s operation to stop the disc completely.	F0~FF

8.10. Sales demostration lock function

This function prevents discs from being lost when the unit is used for sales demostrations by disabling the disc eject function.
“LOCKED” is displayed on the unit, and ordinary operation is disabled.

8.10.1. Setting

The sales demostration lock is set by simultaneously pressing STOP button on the player and POWER button on the remote control unit.

8.10.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. (“UNLOCKED” is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

8.11. Service Precautions

8.11.1. Recovery after the DVD player is repaired

When an FROM or an EEPROM in and on the module P.C.B. has replaced, carry out the recovery disc processing to optimize the drive.
Playback the disc above to process the recovery automatically.
Recovery disc (Product number: RFKZD5TR006)
Notes:
This unit requiress no initialization process carried out after the traditional DVD players were repaired.
When the recovery measures are taken, the customer setting will return to the factory setting as same as the procedure described in item of “Initialization” in 8.6 is carried out. Write down the contents of the setting before recovery processing, and reset the player.

8.11.2. Firmware version-up of the DVD player

The firmware of the DVD player may be renewed to improved the quality including operationability and playerbility to the substandard disc processing to optimize the drive.
The version-up disc has also a recovery function so that you don’t need use the recovery disc again.

Note:
If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.
In such case, replace the FROM and carry out the version-up again.
The product number of the version-up disc will be noticed when it is supplied.

8.12. Handling After Completing Repairs

Use the following procedure after completing repairs.

8.12.1. Method

Confirm that the power is turned on:

1. Press the “OPEN/CLOSE” button to close the tray.

2. Press the “POWER” button to turn off the power.

3. Disconnect the power plug from the outlet.

8.12.2. Precautions

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually.

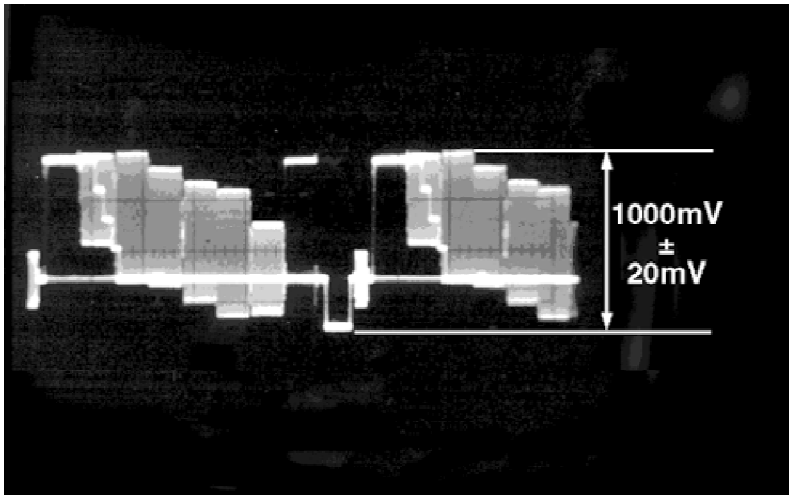
9. Electrical Adjustment

9.1. Video Output (Brightness Signal) adjustment

Carry out this adjustment after board replacement.

Measurement Point	Adjustment Mode	Test Disc
Video output jac	Colour bar 75%Playback (Title 46) : DVDT-S15Playback (Title 12): DVDT-S15	DVDT- S15orDVDT-S01
Required equirmentScrewdriver, oscilloscope	Adjustment	
	1000mVp-p±20mV	

Purpose: To ensure compatibility of video signal output.
1. Connect the oscilloscope to the video output jacks and set 75Ω.



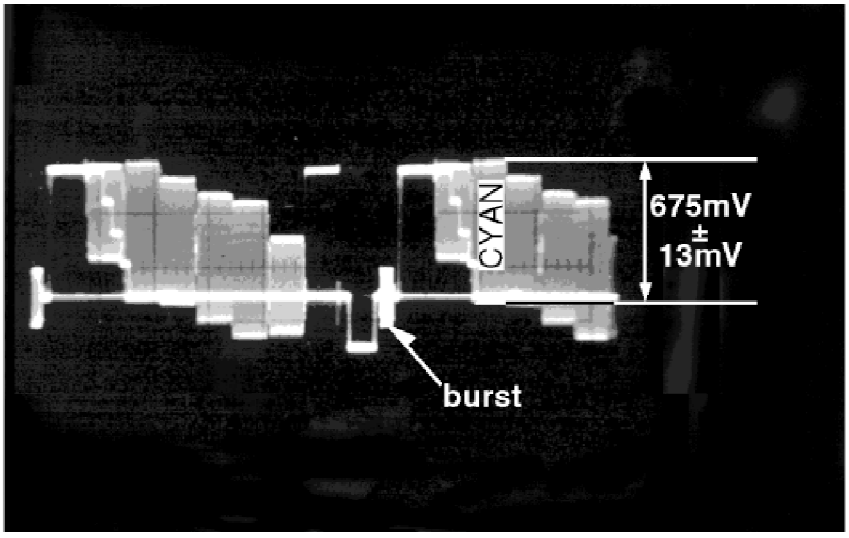
9.2. Video Output (Colour Signal) adjustment

Carry out this adjustment after board replacement.

Measurement Point	Adjustment Mode	Test Disc
Video output jac	Colour bar 75%Playback (Title 46) : DVDT-S15Playback (Title 12): DVDT-S15	DVDT- S15orDVDT-S01
Required equirmentScrewdriver, oscilloscope200mV/ div, 10 μ sec/div	Adjustment	
	675mVp-p±13mV	

Purpose: To ensure compatibility of video signal output.

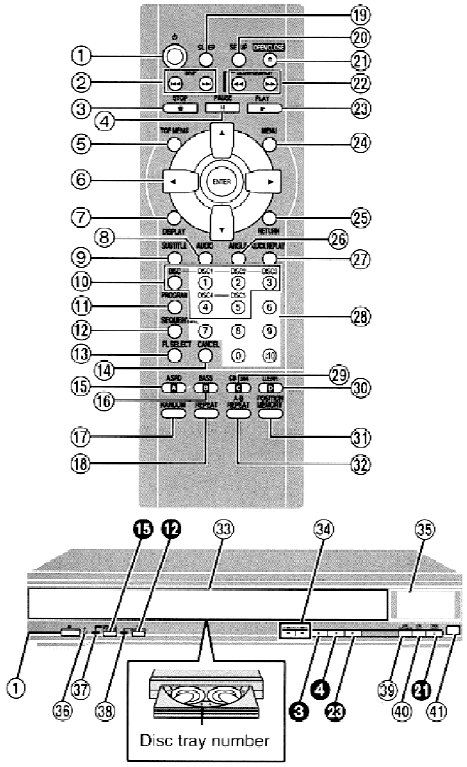
1. Connect the oscilloscope to the video output jacks and set 75 Ω .



10. Operation Procedure

Control reference guide

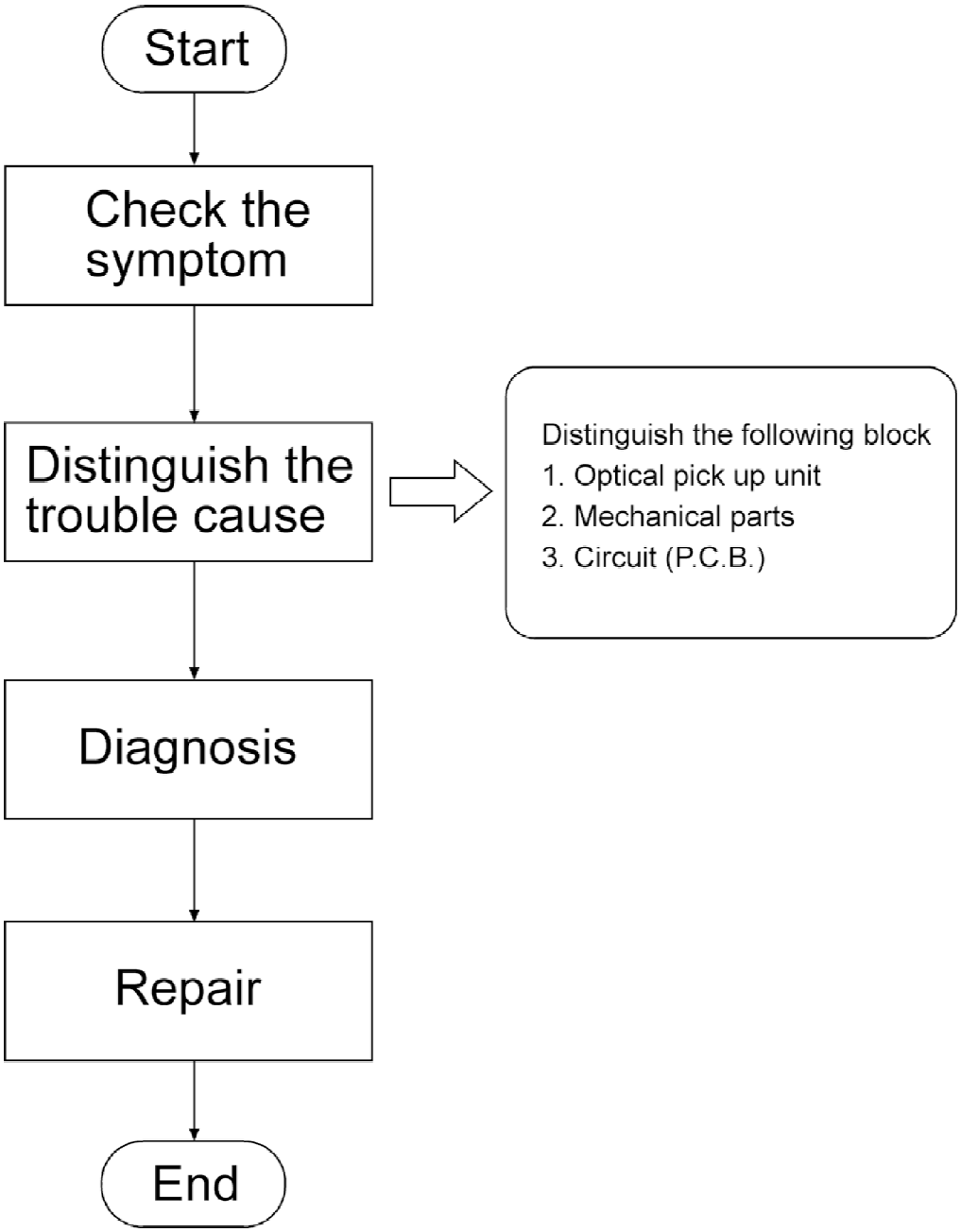
Operations in these instructions are described mainly with the remote control, but you can do the operations on the main unit if the controls are the same.



Buttons such as ❸ function the same as the controls on the remote control.

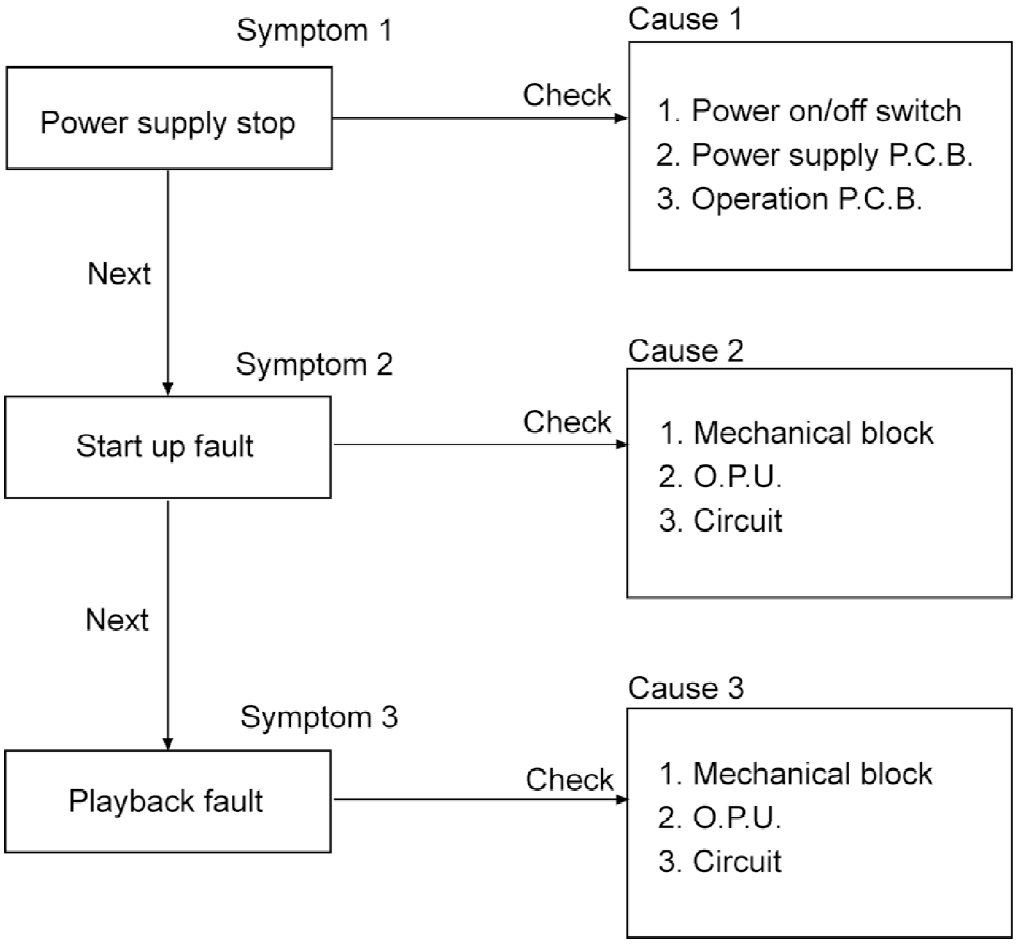
① Standby/on switch (⏻/I)
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.
② Skip buttons (⏮, ⏭ SKIP)
③ Stop button (■ STOP)
④ Pause button (❚❚ PAUSE)
⑤ Top menu button (TOP MENU)
⑥ Cursor buttons (▲, ▼, ◄, ►)/Enter button (ENTER)
⑦ Display button (DISPLAY)
⑧ Audio button (AUDIO)
⑨ Subtitle button (SUBTITLE)
⑩ Disc select button (DISC), Disc buttons (DISC1 – DISC5)
⑪ Program button (PROGRAM)
⑫ Sequential button (SEQUENTIAL)
⑬ FL select button (FL SELECT)
⑭ Cancel button (CANCEL)
⑮ Advanced Surround button (A A.SRD)
⑯ Bass plus button (B BASS)
⑰ Random play button (RANDOM)
⑱ Repeat button (REPEAT)
⑲ Sleep button (SLEEP)
⑳ Setup button (SETUP)
㉑ Drawer open/close button (⏏ OPEN/CLOSE)
㉒ Slow/Search buttons (◄◄, ►► SLOW/SEARCH)
㉓ Play button (► PLAY)
㉔ Menu button (MENU)
㉕ Return button (RETURN)
㉖ Angle button (ANGLE)
㉗ Quick replay button (QUICK REPLAY)
㉘ Numbered buttons (1–9, 0, ≧10)
㉙ Cinema button (C CINEMA)
㉚ Dialogue Enhancer button (D D.ENH)
㉛ Position memory button (POSITION MEMORY)
㉜ A-B repeat button (A-B REPEAT)
㉝ Drawer
㉞ Skip, Search buttons (⏮ ⏭, ◄◄ ►►)
㉟ Display
㊱ Standby indicator (⏻)
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
㊲ Advanced Surround indicator
㊳ CD sequential indicator
㊴ Disc exchange button (DISC EXCHANGE)
㊵ Disc skip button (DISC SKIP)
㊶ Remote control signal sensor

11. Procedure for reparing the set



11.1. Distinguish the trouble cause

• Check flow



How to distinguish the trouble

1. View mechanical part if visual damage occurred.
Confirm the movement of mechanical parts assembly (tray ass'y, loading mechanism ass'y, etc.).

2. Diagnose if Optical Pickup Unit is faulty (refer to diagnosis of Optical Pickup Unit).

3. If mechanism and OPU are OK, it is P.C.B.

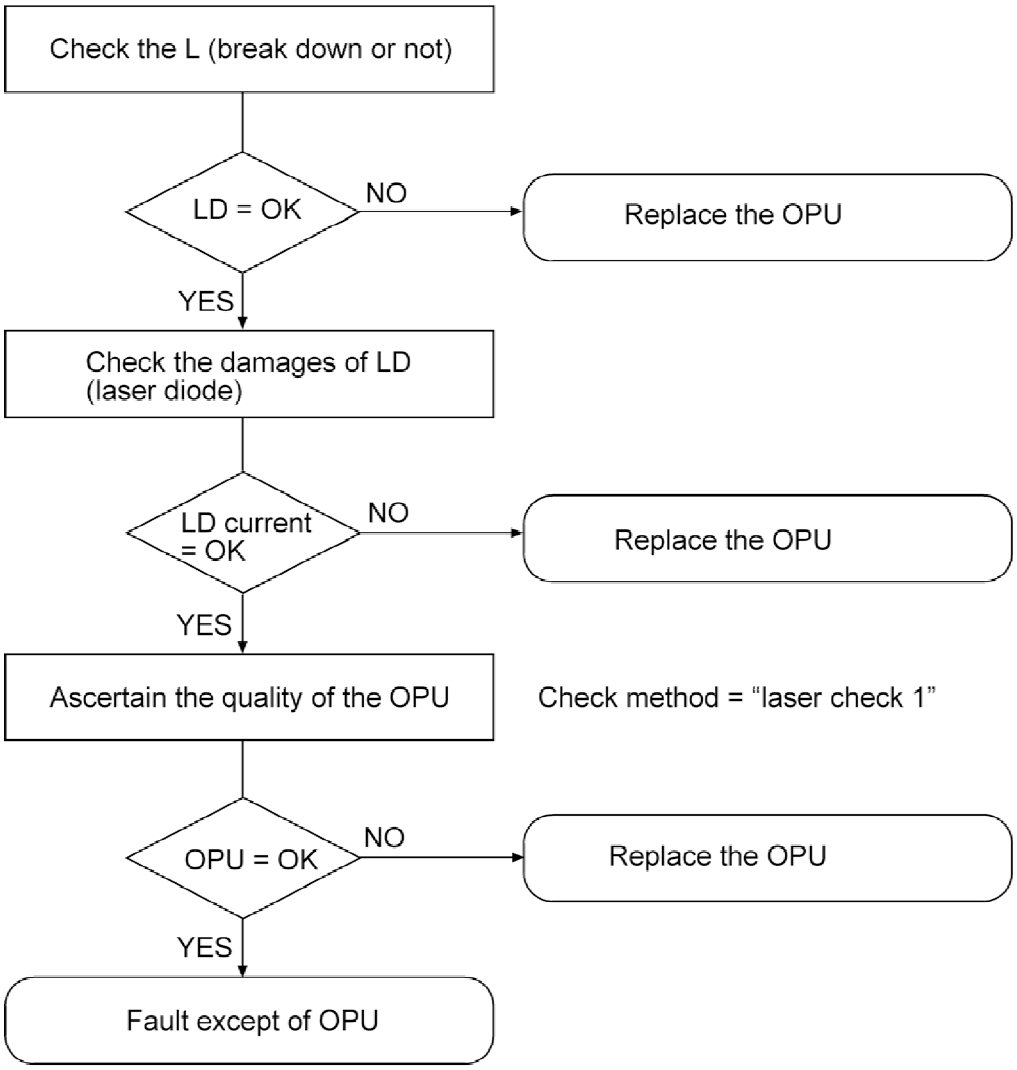
Cause 1	Possible fault
1. Power ON/OFF switch	Power switch, connector cable
2. Power supply P.C.B.	D1011, T1021, Q1051 etc.
3. Operational P.C.B.	CPU (IC6001), X6001, IC6002 etc.

Cause 2	Possible fault
1. Mechanical block	Tray and loading mechanical block, traverse
2. O.P.U.	Refer to the diagnosis of OPU
3. Circuit	LD drive, servo (Traverse, Focus, Tracking) Disc sensor Signal processing (FEP, ADSC etc.)

Cause 3	Possible fault
1. Mechanical block	Traverse block (Tilt adjustment)
2. O.P.U.	Refer to the diagnosis of OPU
3. Circuit	Servo (Focus, tracking) Signal processing (FEP, ODC, AVDEC, A-DAC etc.)

11.2. Diagnosis of Optical Pick-up Unit

Diagnosis Method
Diagnose the OPU by the following procedure



Note : When LD does not emit light after replacing the OPU, check the LD drive circuit in the module P.C.B.

How to distinguish Laser destruction/damage
Confirmation 1
Remove cover of mechanism block so that you will see the lens of optical pickup.
Confirm emission of laser at the moment when power switch is turned on.
If there is no laser emission, laser diode is faulty.
Confirmation 2
While holding "Pause" and "Open/Close" button, press "Display" button on the remote controller. Unit display laser current on FL.
From the reading of display, you can judge if laser diode is damaged or not.
Reading on the right side should be less than 70. If reading is more than 70, laser is damaged.

How to confirm if Optical Pickup is OK
Confirmation 1

1. **Confirmation of jitter value with test disc. (Refer below for how to check jitter)**
2. **Lens cleaning.**
3. **Reconfirm jitter value.**
4. **Perform tile adjustment. (Refer to tilt adjustment)**
5. **Reconfirm jitter value. (To confirm jitter value, while pressing "Pause" and "Open/Close" button, press numeric "5" on remote controller.)**
   Unit display jitter value on FL.

Confirmation 2
If servo is very unstable due to optical error and you cannot confirm jitter value, clean the lens and check appearance of pick up unit (cutting coil of actuator, etc), then check circuitry.

12. Disassembly and Main Component Replacement Procedures

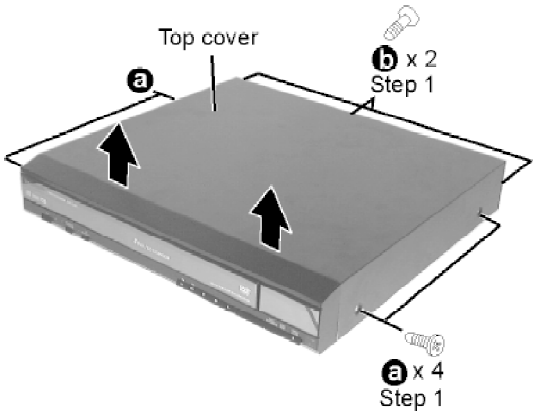
"ATTENTION SERVICER"

Some chassis components may have sharp edges.
Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For assembly after operation checks or replacement, reverse the respective procedures.**
   Special reassembly procedures are described only when required.
3. **Select items from the following index when checks or replacement are required.**

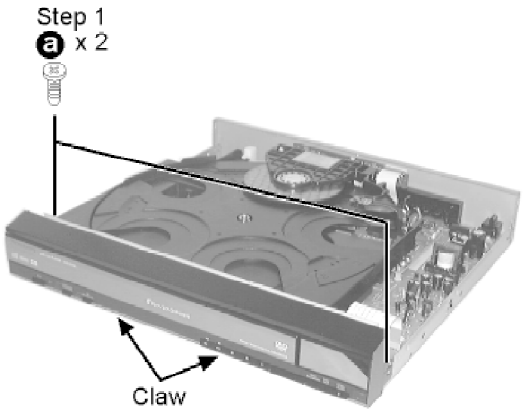
12.1. Disassembling the Top Cover

1. Remove the 4 screws each side and 3 screws at rear panel.

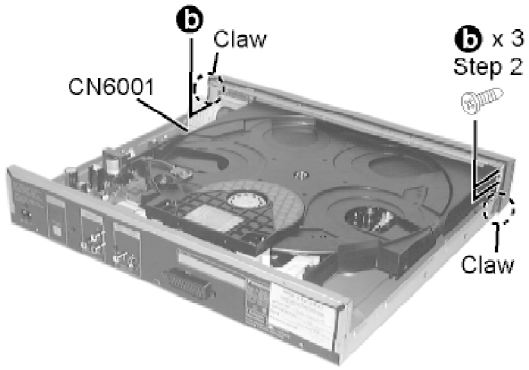


12.2. Disassembling the Front Panel

1. Remove the 2 screws.



2. Release 2 claws below.

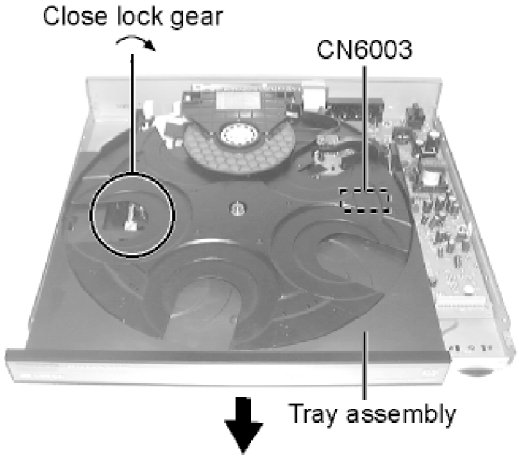


3. Remove the 3 screws behind the rear panel and disconnect CN6001.

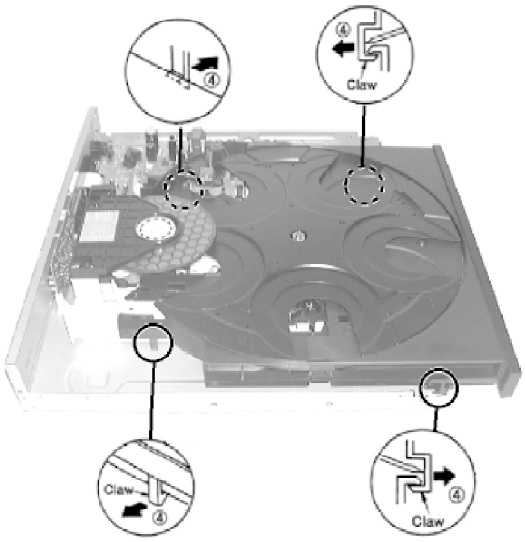
4. Release 2 claws each side.

12.3. Disassembling the Tray Assembly

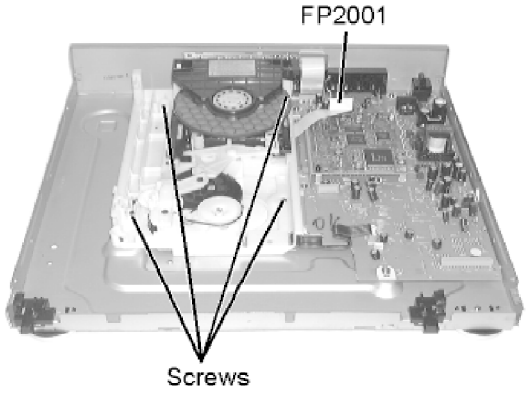
1. Keep the close lock gear pressed in clockwise, move the tray assembly in the direction of the arrow..



2. Release connector CN6002.



3. Push and release the 4 claws in the direction of arrow 3, and then remove the tray assembly in the direction of arrow 4.

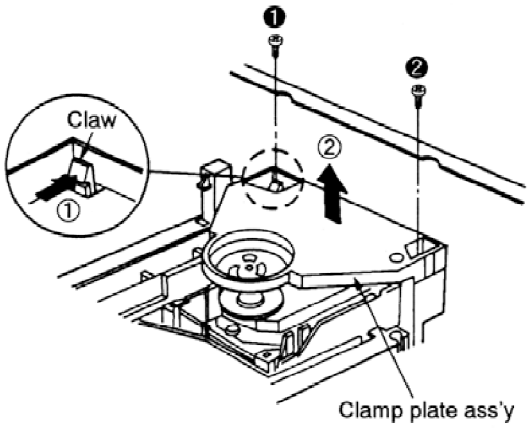


4. Pull out the FFC CN6003 and FP2001.

12.4. Disassembling the Clamp Plate Assembly

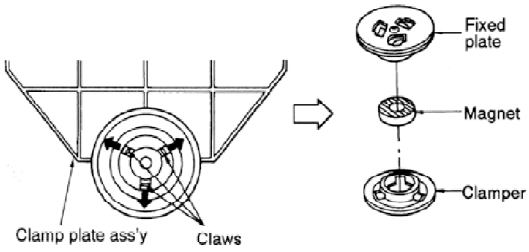
1. Remove 2 screws.

2. Push the claw in the direction of arrow 1, and then remove the clamp plate ass'y in the direction of arrow 2.



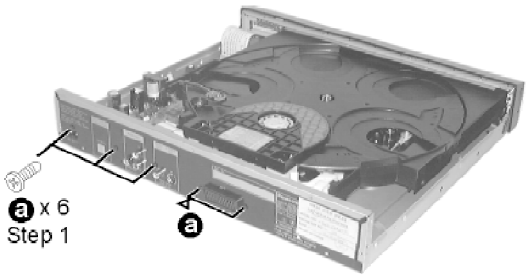
12.5. Disassembling the Fixed Plate, Magnet and Clamper

1. Release the 3 claws in the direction of arrow.

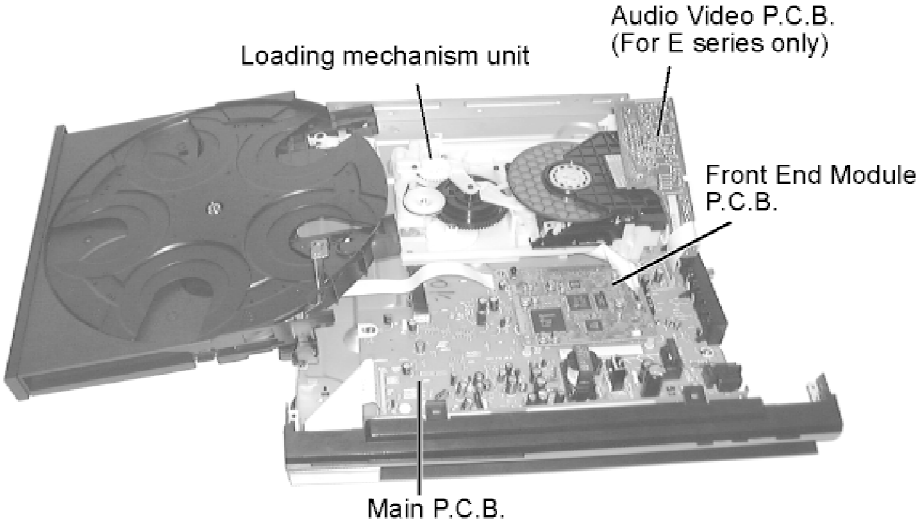


12.6. Disassembling the Rear Panel

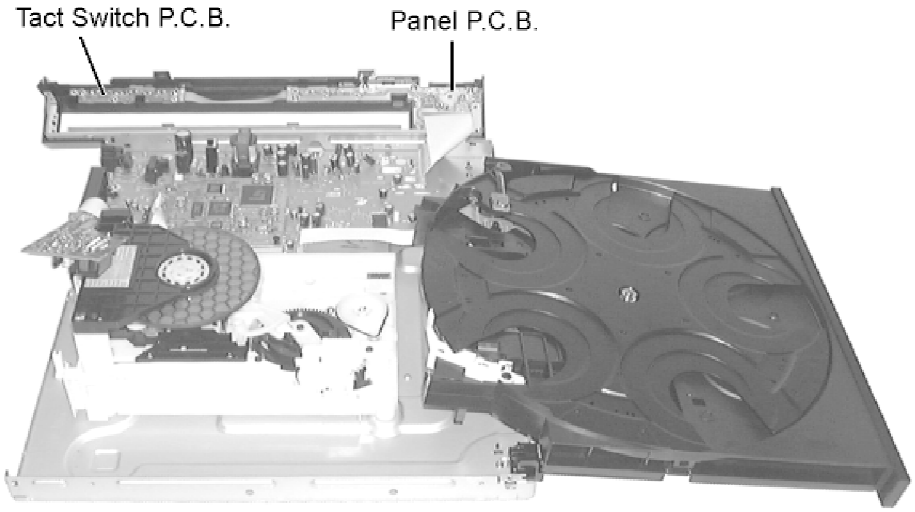
1. Remove 6 screws at the rear panel.

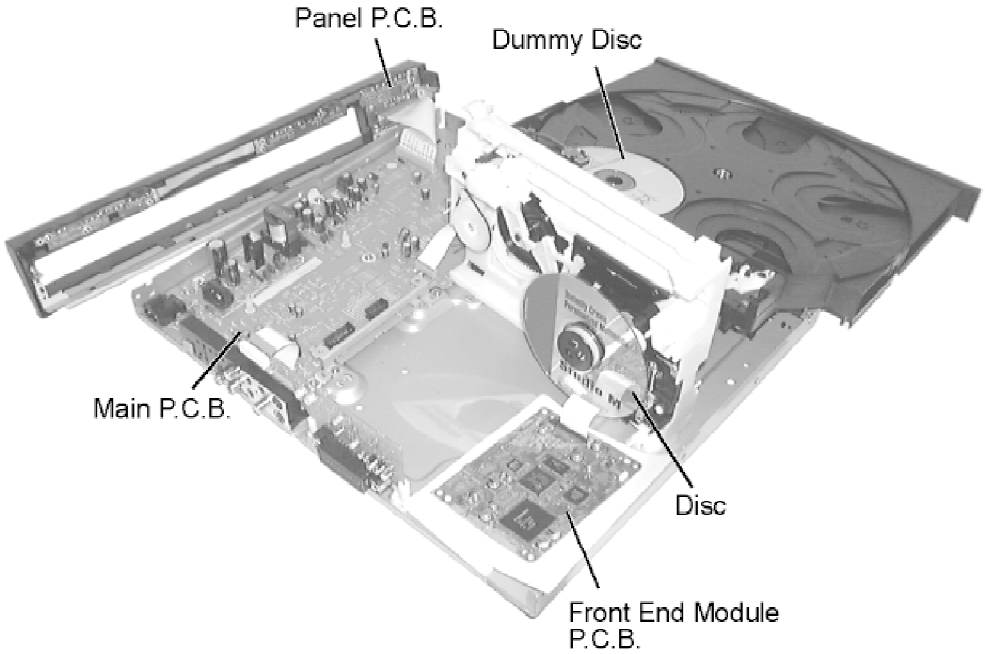


12.7. Checking for major P.C.B..

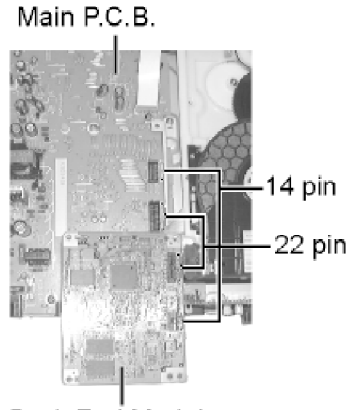


Service position for checking the Front End Module P.C.B.





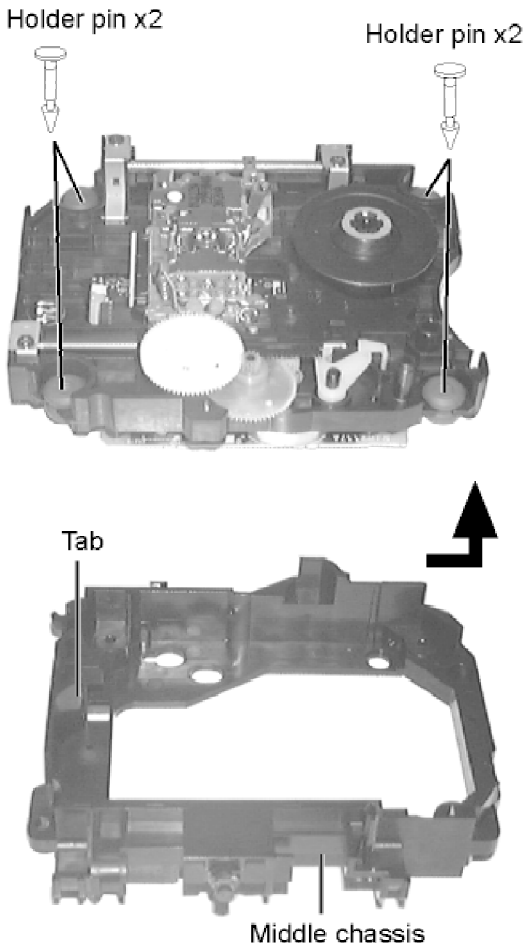
1. Set the dummy disc on the tray before playback the disc.
First, playback the disc with Loading Mechanism block in normal position, then stand up the Loading Mechanism block vertically.
Service position for Checking the foil side of Back end Module P.C.B.



Extension Cable
(Main P.C.B. to Back End Module P.C.B.)
JGS0116 - 22 pin
JGS0098 - 14 pin

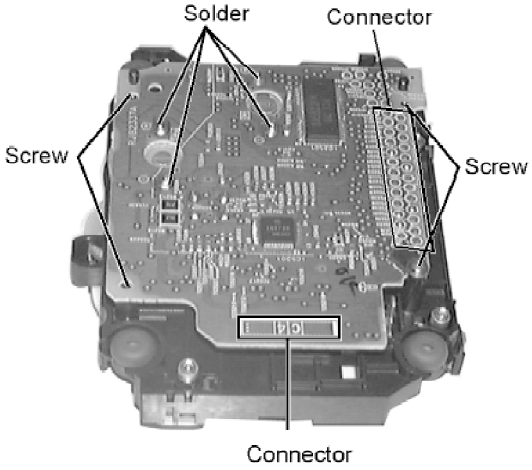
12.8. Disassembling the Middle Chassis

Step 1 Remove the holder pins.
Step 2 Remove the tab.
Step 3 It lifts while pulling it in the direction of the arrow.



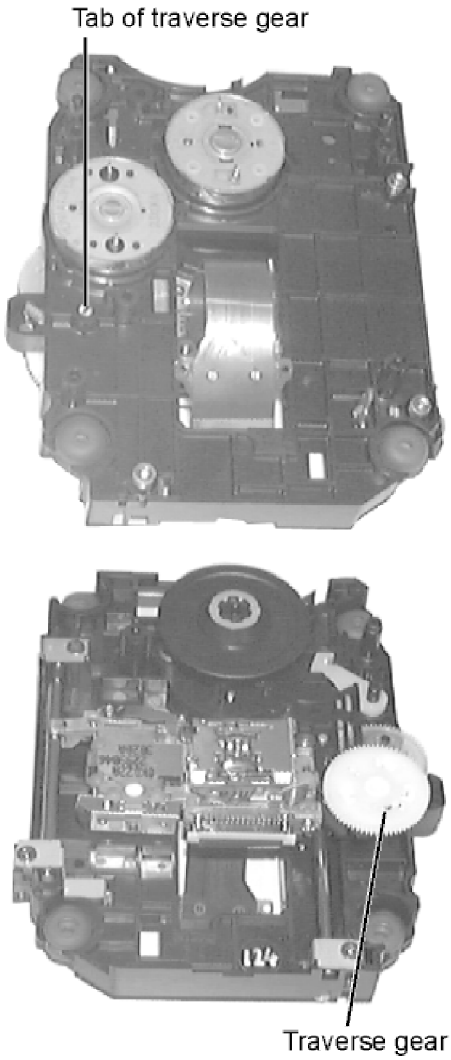
12.9. Terminal P.C.B.

Step 1 Unscrew the screw.
Step 2 Remove the solders.
Step 3 Remove the connector.



12.10. Traverse Gear

Step 1 Disengage the tabs from the traverse gear.
Step 2 Remove the traverse gear.

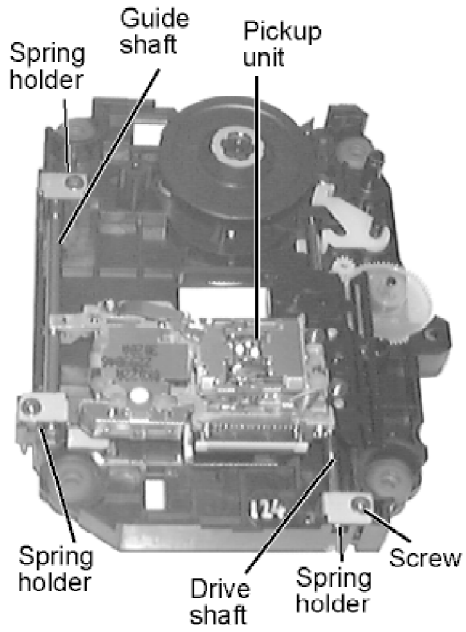


12.11. Optical Pickup Unit

Step 1 Unscrew the screws.

Step 2 Remove the spring holders and the springs.

Step 3 Pull out the drive shaft and guide shaft.



12.11.1. Precautions in optical pickup replacement

The optical pickup can be damaged by static electricity from your body. Be sure to take static electricity countermeasures when working around the optical pickup. (Refer to the related page in this Manual about the countermeasures.)

1. Do not touch laser diode, actuator and their peripheries.

2. Do not use tester to check laser diode. (Laser diode can be damaged easily.)

3. The use of soldering iron with anti-static feature is recommended when providing short-circuit to laser diode or when removing it.

4. Solder the land on flexible cable of optical pickup unit.

Caution

- When using the soldering iron without anti-static feature, short circuit the flexible cable terminal with a clip before short-circuiting the land.

- After intended repair is finished, remove the solder for short-circuit of laser diode in a correct way following the procedure described in this Manual.

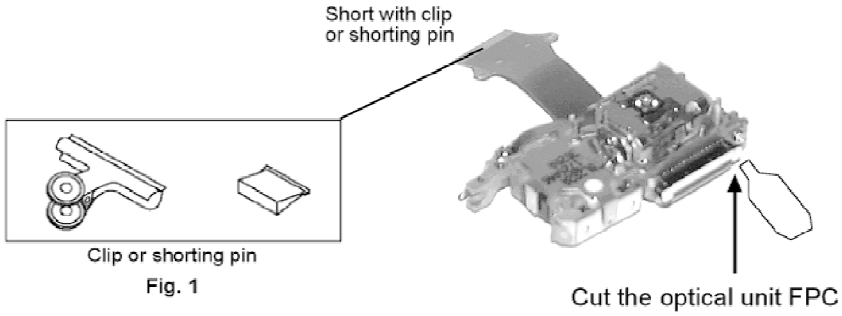
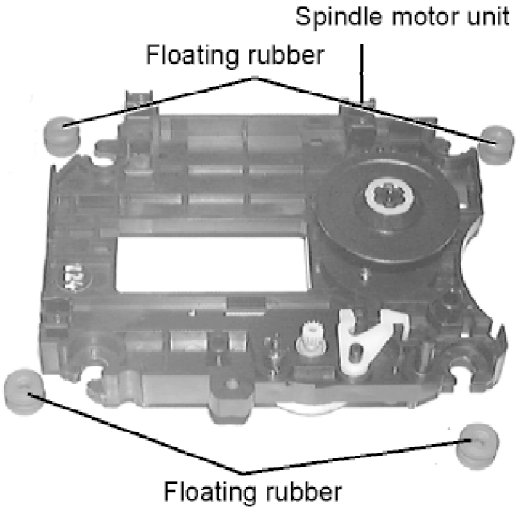


Fig. 1

12.12. Disassembling the Spindle Motor Unit

Step 1 Remove the floating rubbers.



13. Adjustment Procedures

13.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	Hex wrench	Available on sale route.
Inspection	Extension cable (module P.C.B. to mother P.C.B.)	JGS0116
	Extension cable (module P.C.B. to mother P.C.B.)	JGS0098
Others	Screw lock	RZZ0L01
	Frease (1)	RFKXGAK152
	Grease (2)	RFKXGP641
	Oil (1)	RFKXGA1280
Confirmation	CD test disc	PVCD-K06 or any other commercial available disc
	VCD test disc	PVCD-K06 or any other commer available disc
	Recovery disc	RFKZD5TR006

13.2. Important points in adjustment

13.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit.
2. Spindle motor unit.
3. Optical pickup peripheral parts (such as rail).

Notes

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment is generally unnecessary after replacing in traverse unit.

13.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this Manual.

13.3. Storing and Handling Test Discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

1. Do not place discs directly onto the workbench, etc,. after use.
2. Handle disc carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store disc in a cool place where they are not exposed to direct sunlight or air from air conditioners.
3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustment.
4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

13.4. Optical adjustment

13.4.1. Optical pickup tilt adjustment

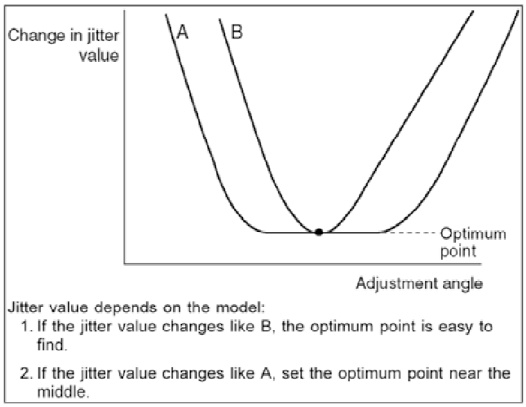
Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screwTilt adjustment screw	T01 (inner periphery) playT43 (outer periphery) play	DVDR-S15 or D\
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjustment to the minimum jitter value.	

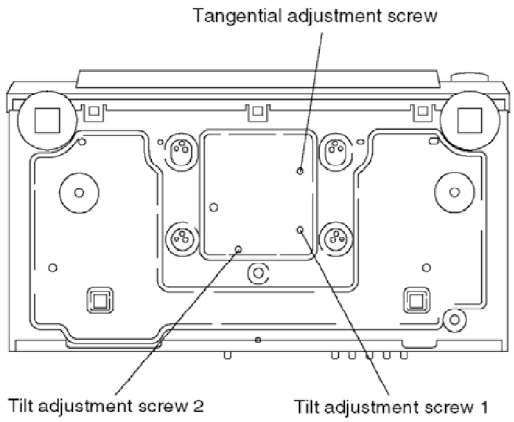
13.4.1.1. Adjustment procedure

1. Whie pressing PAUSE and OPEN/CLOSE buttons on the main unit, press “5” on the remote control unit.
2. Confirm that “J_xxx_yyy_zz” is shown on the front display.
   For your information:
   “yyy” and “zz” shown to the right have nothing to do with the jitter value. “yyy” is the error counter, while “zz” is the focus drive value.
   Note:
   Jitter value appears on the front display.
3. Play test disc T01 (inner periphery).
4. Adjust tangential adjustment screw so that the jitter value is minimized.
5. Play test disc T43 (outer periphery).
6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
7. Play test disc T43 (outer periphery).
8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
9. Repeat adjusting tilt adjustment screw 1 and 2 alternately unitl the jitter value is minimized.

13.4.1.2. Important points

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



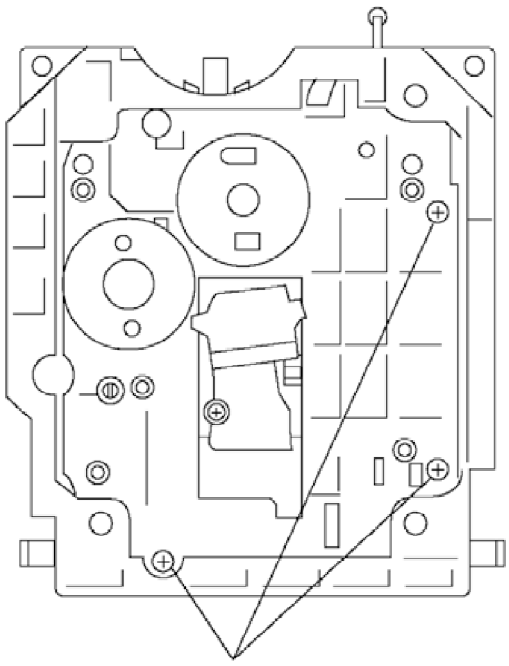


13.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

13.4.1.4. Procedure for screw lock

1. **After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.**
2. **Lay the traverse unit upside down, and fix adjustment screw with screw lock.**
3. **After fixing, reassemble traverse unit, clamper base, tray and top cover.**



14. Terminal Function of IC’s

14.1. IC6001 (MN101C35DCN) System Microprocessor

Pin No.	Mark	I/O	Function
1	CMD	O	Serial output
2	STAT	I	Serial input
3	DSPSCLK	I	Serial clock
4	P03/O:YCL	O	Not used
5	P04/O:Compl	O	Not used
6	P05/RGBH	O	Not used
7	P06	O	Port
8	VDD	I	5V
9	OSC2	O	Clock
10	OSC1	I	Clock
11	VSS	I	GND
12	XI	I	Not used
13	XO	O	Not used
14	MMOD	I	Memory mode L
15	VREF-	I	A/D reference L
16	PA0/KEYIN0	I	A/D key input
17	PA1/KEYIN1	I	A/D key input
18	PA2/KEYIN2	I	A/D key input
19	PA3	I	Port
20	PA4	I	Port
21	PA5	I	Port

Pin No.	Mark	I/O	Function
22	PA6	I	Port
23	PA7	I	Port
24	VREF+	I	A/D reference H
25	P07/O:	O	Mecha control
26	/RST	I	Reset
27	P10/O:TURN	O	Mecha control
28	P11/O:DIR	O	Mecha control
29	P12/O:PWM	O	Mecha control
30	P13/O: P_OFF(L)	O	Power OFF
31	P14/O: POWER_MUTE	O	Power mute
32	P15/O:WIDE_1	O	
33	IRQ0(REMOCON)	I	Remote controller input
34	P21/I:UDW	I	Disc_Sens
35	P22/I:R-0	I	Tray open
36	P23/I:POSITION	I	Mecha control
37	P24/I:SPEED	I	Mecha control
38	P25	I	Not used
39	P30/O:IPSEL	O	Not used
40	P31/O: 0.1CHMUTE	O	Mute
41	P32/O:0.1CH	O	0.1 CH
42	P50/O: STDBY_LED	O	LED
43	P51/O: CDSEQ_LED	O	LED
44	P52/O: ASRD_LED	O	LED
45	P53/O: AONLY_LED	O	LED
46	P54/O: PRGR_LED	O	LED
47-63	DGT17-DGT1	O	FL-DGT
64-99	SEG7-SEG42	O	FL-SEG
100	VPP	I	FL-23V

15. Block Diagram

16. Schematic Diagram

(All schematic diagrams may be modified at any time with the development of the new

technology)
Note:

S551
: Switch

S6401
: Stop switch

S6402
: Pause switch

S6403
: Play switch

S6404
: Disc Exchange switch

S6405
: Disc Skip switch

S6406
: Reverse Skip switch

S6407
: Forward Skip switch

S6408
: Open/ Close switch

S6409
: Power switch

S6410
: A. Surd. switch

S6411
: CD SEQ switch

SW2501
: Leaf switch

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark	: Playback	<< >>	: Rec	< >	: FM
(( ))	: CD	( )	: AM	[ ]	: AUX

- Importance safety notice :

Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

CAUTION: TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

17. Printed Circuit Board

18. Wiring Connection Diagram

19. Parts Location and Replacement Parts List

Notes:

- Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)
Parts without these indications can be used for all areas.

- Warning: This product uses a laser diode. Refer to caution statements on "Precaution of Laser Diode".
ACHTUNG:

- Die Lasereinheit nicht zerlegen.

- Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.

- Capacitor values are in microfarads (μ F) unless specified otherwise, P= Pico-farads (pF), F= Farads.

- Resistance values are in ohms, unless specified otherwise, 1K= 1,000 (OHM).

- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

- [M] Indicates in the Remarks columns indicates parts supplied by MESA.

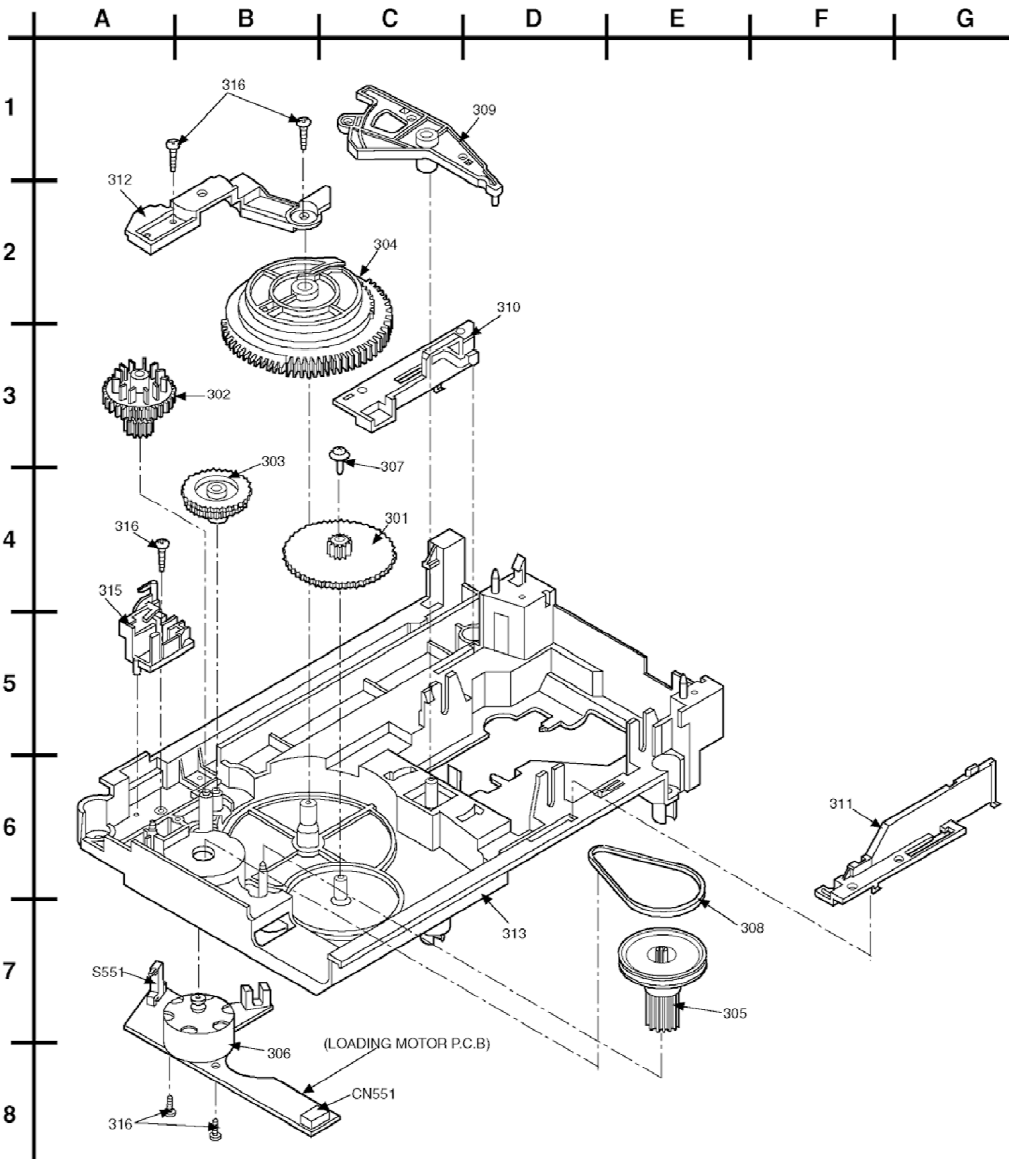
- The "(SF)" mark denotes the standard part.

- Reference for O/I book languages are as follows:

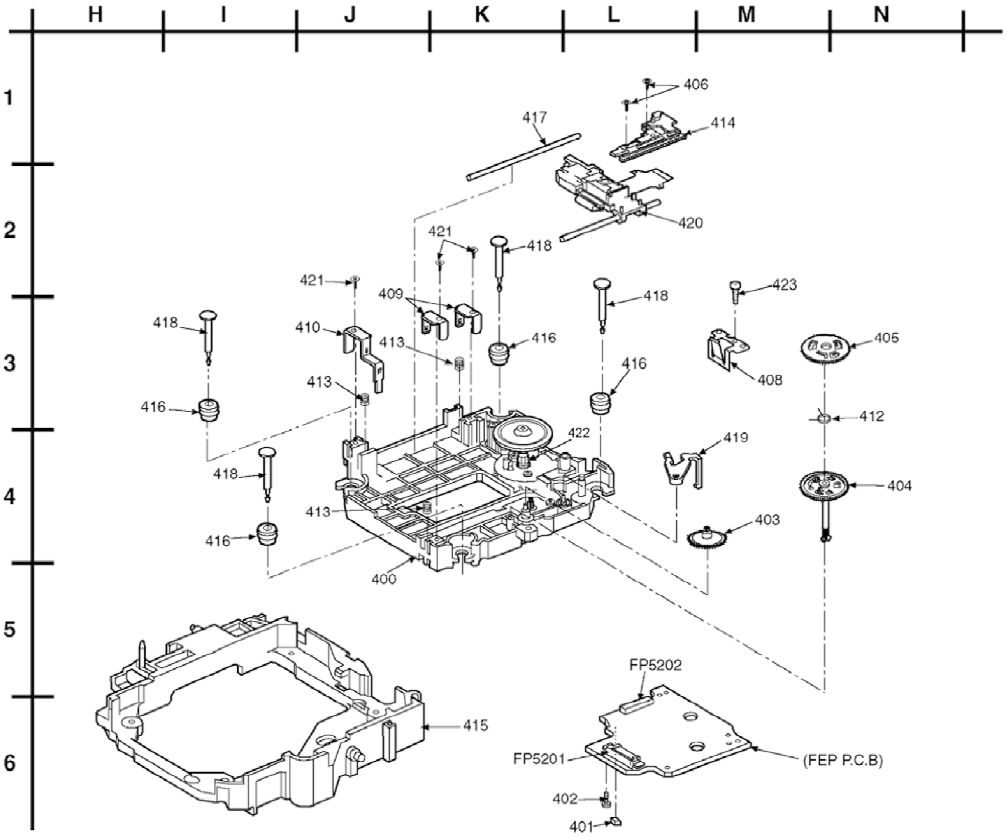
Ar :	Arabic	Du :	Dutch	It :	Italian	Sp :	Spanish
Cf :	Canadian French	En :	English	Ko :	Korean	Sw :	Swedish
Cz :	Czech	Fr :	French	Po :	Polish	Co :	Traditio Chinese
Da :	Danish	Ge :	German	Ru :	Russian	Cn :	Simplifi Chinese

19.1. Loading Mechanism and Traverse Unit

19.1.1. Loading Mechanism Parts Location



19.1.2. Traverse Parts Location



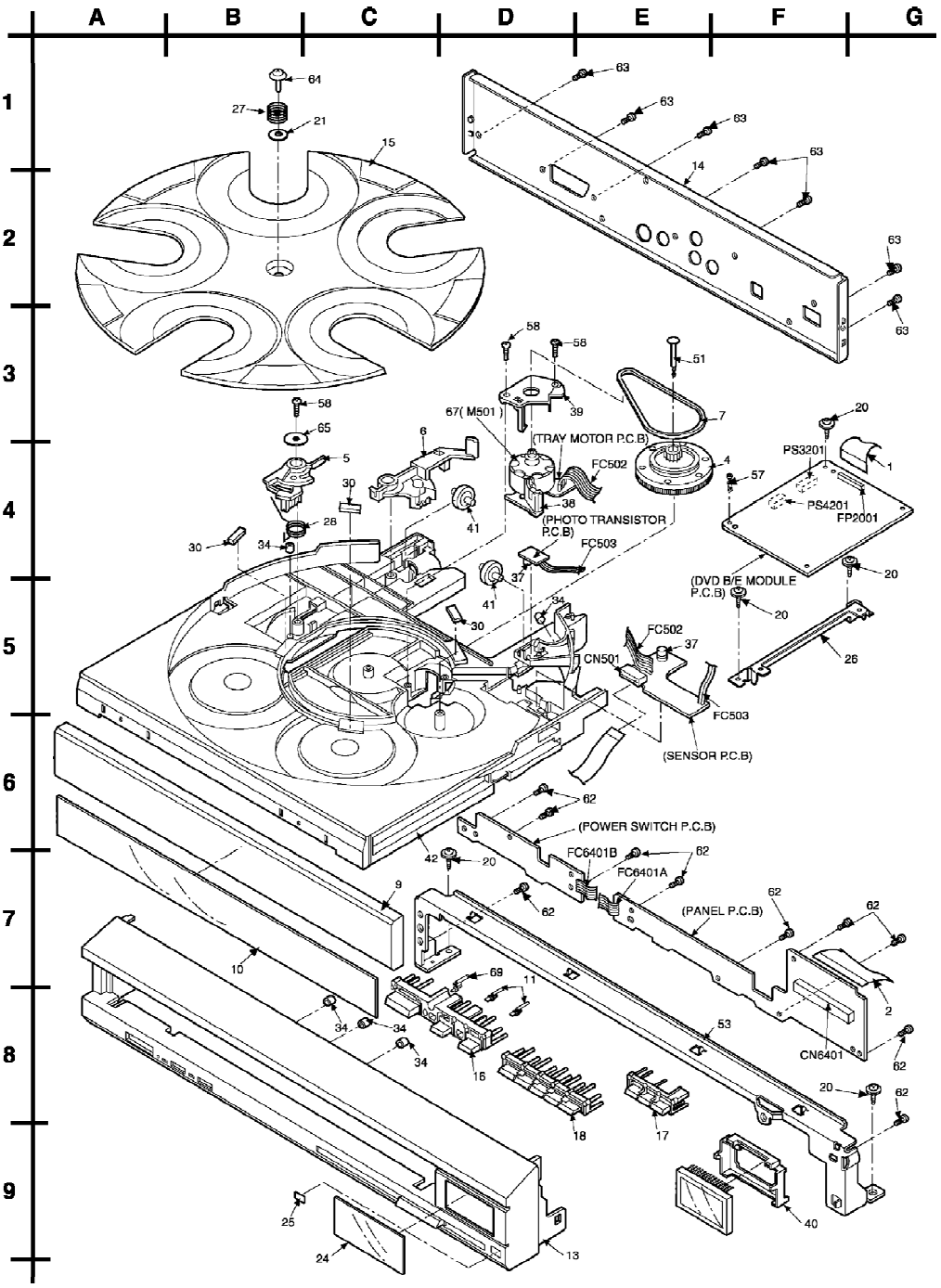
19.1.3. Loading Mechanism and Traverse Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RDG0270	SPEED REDUCTION GEAR	[M]
302	RDG0271	DRIVE GEAR A	[M]
303	RDG0272	DRIVE GEAR B	[M]
304	RDK0025	DRIVE CAM	[M]
305	RDP0050	PULLEY GEAR	[M]
306	RFKPLPD667PB	LOADING MOTOR ASS'Y	[M]
307	RHD26019	SCREW	[M]
308	RMG0268-K	BELT	[M]
309	RML0334	CHANGE LEVER	[M]
310	RMM0117	SLIDE PLATE 1	[M]
311	RMM0118-1	SLIDE PLATE 2	[M]
312	RMR0746-W	STRENGTHENING PLATE	[M]
313	RFKNDCV51CAK	MECHA BASE ASS'Y	[M]
315	RXQ0346-1	SLIDER ASSY	[M]
316	XTB3+10JFZ	SCREW	[M]
400	RAE1811Z-S	TRV BASE UNIT	[M]
401	RMG0558-K	P.C.B. RUBBER	[M]
402	RHD20060	PCB SCREW	[M]
403	RDG0499	TRV GEAR A	[M]
404	RDG0500	TRV GEAR B	[M]
405	RDG0501	TRV GEAR C	[M]
406	RHD17036	DRIVE RACK SCREW	[M]
408	RMC0387	SUPPORT SPRING	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
409	RMC0415	ADJUST SPRING HOLDER	[M]
410	RMC0416	ADJUST SPRING HOLDER	[M]
412	RME0319	TRV GEAR SPRING	[M]
413	RME0320	ADJUSTMENT SPRING	[M]
414	RMM0234-1	TRV DRIVE RACK	[M]
415	RMR1356-K	UNIT CHASSIS	[M]
416	RMG0545-A	FLOATING RUBBER	[M]
417	RMS0711	GUIDE SHAFT	[M]
418	RMS0712-1	FIXED PIN	[M]
419	RMX0192	INNER STOPPER	[M]
420	RXQ0810	OPU UNIT	[M]
421	VHD1224	ADJ SPRING HOLDER SC	[M]
422	RXQ0749	SPINDLE MOTOR ASS'Y	[SPC]
423	XTV2+6G	PCB SCREW	[M]

19.2. Cabinet

19.2.1. Cabinet Parts Location


A
B
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15
63
14
58
65
6
5
30
28
34
41
67(M501)
39
(TRAY MOTOR P.C.B)
FC502
38
(PHOTO TRANSISTOR P.C.B)
FC503
37
51
7
4
57
PS3201
PS4201
FP2001
1
20
(DVD B/E MODULE P.C.B)
26
CN501
(SENSOR P.C.B)
62
(POWER SWITCH P.C.B)
FC6401B
FC6401A
42
9
10
(PANEL P.C.B)
2
CN6401
68
11
16
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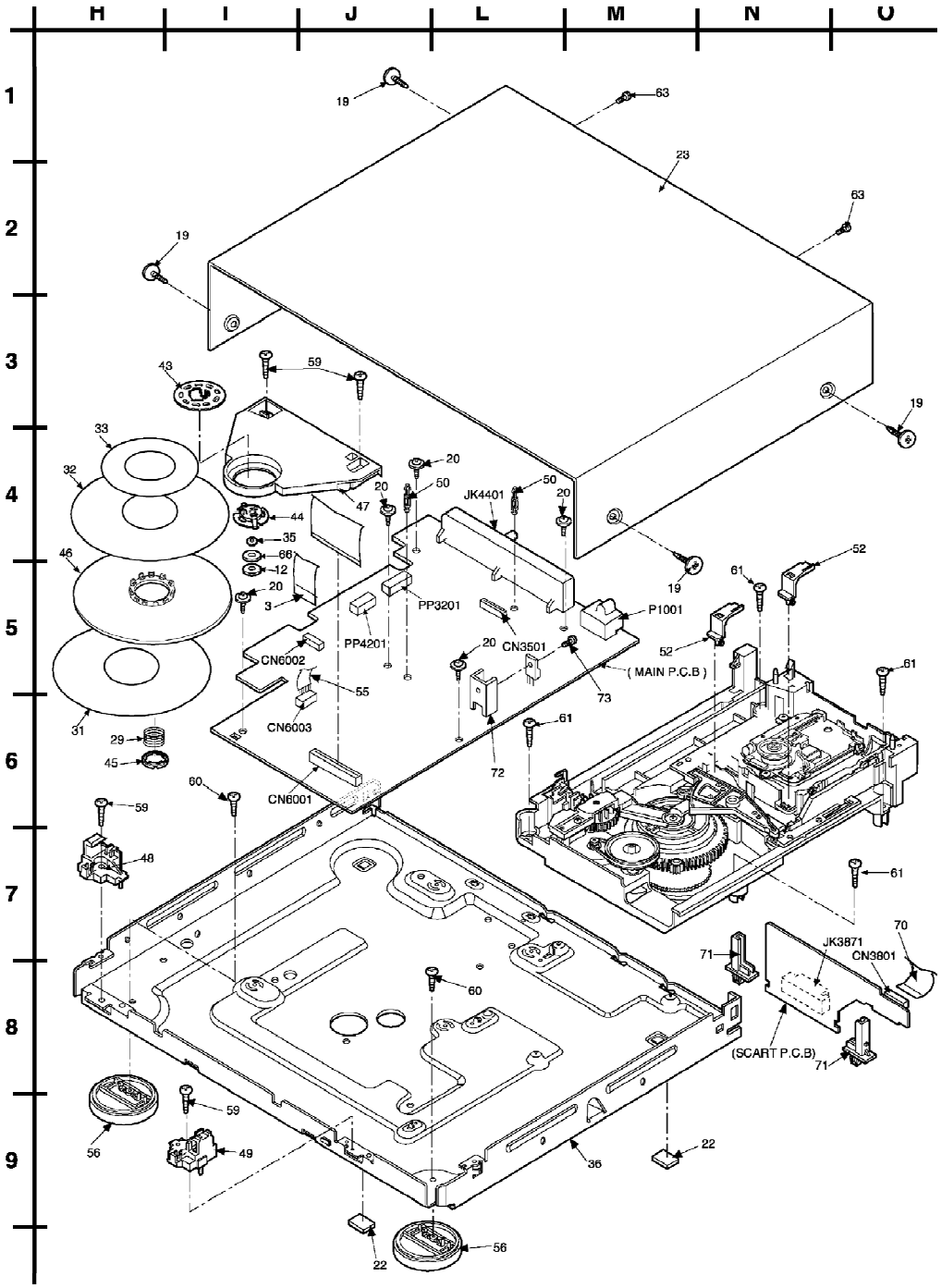


19.2.2. Cabinet Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	REZ1440	50P FFC (TRV-B/E)	[M]
2	REZ1441	35P FFC (PANEL-MAIN)	[M]
3	REZ1442	14 PIN FFC (TRAY-MAI	[M]
4	RDG0267	TRAY REDUCTION GEAR	[M]
5	RDG0268-1	CLOSE LOCK GEAR	[M]
6	RDG0269-3	OPEN LOCK GEAR	[M]
7	RDV0031	BELT	[M]
9	RGK1497-K	TRAY ORNAMENT	[M]K
9	RGK1497-S	TRAY ORNAMENT	[M]S
10	RGK1498F-Q	TRAY SHEET	[M]K
10	RGK1498E-Q	TRAY SHEET	[M]S
11	RGL0585-Q	PANEL LIGHT	[M]
12	JSM0048	MAGNET	[M]
13	RGP0917B-K	FRONT PANEL	[M]K
13	RGP0917B-S	FRONT PANEL	[M]S
14	RGR0325D-A	REAR PANEL	[M]
15	RGT0019-2	ROTARY TRAY	[M]
16	RGU2082-K	POWER BTN	[M]K
16	RGU2082-S	POWER BTN	[M]S
17	RGU2083-K	DISC EXCHANGE BTN	[M]K
17	RGU2083-S	DISC EXCHANGE BTN	[M]S
18	RGU2084-K	PLAY BTN	[M]K
18	RGU2084-S	PLAY BTN	[M]S
19	RHD30007-K1	SCREW	[M]K
19	RHD30007-S	SCREW	[M]S
20	RHD30090	SCREW	[M]
21	RHW81001-1	WASHER	[M]
22	RKA0105-KJ	CUSHION	[M]
23	RKM0462-K1	TOP CABINET	[M]K
23	RKM0462-S1	TOP CABINET	[M]S
24	RKW0681A-Q	FL WINDOW	[M]K
24	RKW0681-Q	FL WINDOW	[M]S
25	RKW0682-K	SENSOR WINDOW	[M]K
25	RKW0682-S	SENSOR WINDOW	[M]S
26	RMA1535	MOD PCB BRACKET	[M]
27	RMB0365	TRAY SPRING	[M]
28	RME0152-3	LOCK GEAR SPRING	[M]
29	RME0318-1	CLAMP SPRING	[M]
30	RMF0182	TRAY FELT	[M]
31	RMF0290	CLAMPER SHEET	[M]
32	RMF0295	UPPER SHEET	[M]
33	RMF0296	INNER SHEET	[M]
34	RMG0200	SHUTTER RUBBER	[M]
35	RMG0546-A	CLAMPER RUBBER	[M]
36	RMK0520	BTM CHASSIS	[M]
37	RMN0254-1	LED HOLDER	[M]
38	RMN0255-2	SENSOR HOLDER	[M]
39	RMN0263	MOTOR HOLDER	[M]
40	RMN0695	FL HOLDER	[M]
41	RMR0546-W2	ROLLER	[M]
42	RMR0745D-K2	SL4 DVD TRAY BASE	[M]
43	RMR1318-X	SPRING HOOK	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
44	RMR1319-X	MAGNET HOLDER	[M]
45	RMR1321-X	SPRING HOLDER	[M]
46	RMR1322-K	CLAMPER	[M]
47	RMR1425-X	SLIM CLAMP PLATE	[M]
48	RMR1438-K	TRAY BASE GUIDE (L)	[M]
49	RMR1439-K	TRAY BASE GUIDE (R)	[M]
50	RMR1440-X	PCB SUPPORT	[M]
51	RMS0123-1	FIXED PIN B	[M]
52	RMX0193	TRAY GUIDE	[M]
53	RSC0628	SHIELD PLATE	[M]
55	RWJ1806120XX	6P WIRE (MECHA-MAIN)	[M]
56	RYQ0349-N	FOOT	[M]
57	SHR415	PLASTIC RIVET	[M]
58	XTB3+10G	SCREW	[M]
59	XTB3+10JFZ	SCREW	[M]
60	XTB3+6J	SCREW	[M]
61	XTB3+8JFZ	SCREW	[M]
62	XTBS26+10J	SCREW	[M]
63	XTBS3+8JFZ1	SCREW	[M]
64	XTWS3+10S	SCREW	[M]
65	XWE3D13	WASHER	[M]
66	XWG6FFY	WASHER	[M]
67	RFKPLPD667PA	TRAY MOTOR ASS'Y	[M]
69	RGL0586-Q	PANEL LIGHT S	[M]
70	REZ1443	19P FFC (SCART-MAIN)	[M]
71	RMN0203	PCB HOLDER	[M]
72	TUC25628	HEAT SINK	[M]
73	XYN3+F8	SCREW	[M]

19.3. Component Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PRINTED CIRCUIT BOARD	
	REP3091A-N	DVD FRONTEND MODULE (1/2) P.C.B.	[M](RTL)
	REP3091A-N	DVD FRONTEND MODULE (2/2) P.C.B.	[M](RTL)
	REP3303V	DVD B/E MODULE (1/2) P.C.B.	[M](RTL)
	REP3303V	DVD B/E MODULE (2/2) P.C.B.	[M](RTL)
	REP3374B	MAIN P.C.B.	[M](RTL)
	REP3320B	PANEL P.C.B.	[M](RTL)
	REP3320B	POWER SWITCH P.C.B.	[M](RTL)
	REPX0095A-N	LOADING MOTOR P.C.B.	[M](RTL)
	REPX0096A-N	PHOTO TRANSISTOR P.C.B.	[M](RTL)
	REPX0096A-N	SENSOR P.C.B.	[M](RTL)
	REPX0096A-N	TRAY MOTOR P.C.B.	[M](RTL)
	REP3321A	SCART P.C.B.	[M](RTL)
		INTEGRATED CIRCUITS	
IC501	BA6247N	IC	[M]
IC1101	C0DAEMZ00001	IC	[M] ⚠
IC1151	C0CBCHG00003	IC	[M] ⚠
IC2001	MN677203NP1	IC NODC	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC2061	C3ABKG000057	IC 4M DRAM	[M]
IC2501	C0GBG0000033	IC PRIVER	[M]
IC3001	MN677533MP	IC	[M]
IC3061	C3ABMG000103	IC 16M SDRAM	[M]
IC3071	C3ABMG000103	IC 16M SDRAM	[M]
IC3201	C0ZBZ0000510	IC	[M]
IC3501	C9ZB00000394	IC VIDIO BUFFER	[M]
IC3801	C1AB00001466	IC V. BUFFER	[M]
IC3821	C0JBAR000245	IC	[M]
IC3822	BA7660FS-E2	IC VIDEO AMP	[M]
IC3841	XN0460100L	IC CHIP DUAL TRANSIS	[M]
IC4201	C0FBBK000030	IC	[M]
IC4311	C0ABBB000118	IC	[M]
IC4312	C0CAADC00013	IC	[M]
IC4391	C0ABBB000118	IC	[M]
IC5201	AN8708FHK	IC	[M]
IC6001	MN101C35DCN	IC MICON	[M]
IC6011	C0EBE0000106	IC	[M]
IC6201	MN102H60GFC	IC CPU	[M]
IC6221	C0JBAA000001	IC	[M]
IC6222	C0JBAA000001	IC	[M]
IC6251	C0DBCGE00002	IC REGULATOR	[M] ⚠
IC6301	PST596JNR	IC RESET	[M]
IC6302	RFKFCV62D080	IC 8M FLASH ROM	[SPC]
IC6303	C3EBFC000030	IC 8M EEPROM	[M]
IC6401	B3RAB0000013	IC REMOTE RECEIVER	[M]
IC6501	C1DB00000582	IC	[M]
		TRANSISTORS	
Q501	PT381	TRANSISTOR	[M]
Q1021	2SC4908LF654	TRANSISTOR	[M]
Q1051	B3PBA0000104	TRANSISTOR	[M]
Q1052	2SD19960SA	TRANSISTOR	[M] ⚠
Q1115	B1DHCC000029	TRANSISTOR	[M] ⚠
Q1125	2SB14170QA	TRANSISTOR	[M]
Q1126	XN0150100L	TRANSISTOR	[M] ⚠
Q1165	2SA1309ARA	TRANSISTOR	[M] ⚠
Q3111	2SB1218ARL	TRANSISTOR	[M]
Q3116	2SB1218ARL	TRANSISTOR	[M]
Q3211	2SB1218ARL	TRANSISTOR	[M]
Q3541	2SD0601AHL	TRANSISTOR	[M]
Q3551	2SD0601AHL	TRANSISTOR	[M]
Q3561	2SD0601AHL	TRANSISTOR	[M]
Q3841	2SD0601AHL	TRANSISTOR	[M]
Q4402	2SD0601AHL	TRANSISTOR	[M]
Q4411	2SD132800L	TRANSISTOR	[M]
Q4415	2SD0601AHL	TRANSISTOR	[M]
Q4421	2SD132800L	TRANSISTOR	[M]
Q4425	2SD0601AHL	TRANSISTOR	[M]
Q4431	2SD0601AHL	TRANSISTOR	[M]
Q4441	2SD0601AHL	TRANSISTOR	[M]
Q4445	2SD0601AHL	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q5211	B1BDBF000004	TRANSISTOR	[M]
Q5215	B1BDBF000004	TRANSISTOR	[M]
Q6091	2SD1996-STA	TRANSISTOR	[M]
Q6401	DTA123JK-T96	TRANSISTOR	[M]
Q6402	DTA123JK-T96	TRANSISTOR	[M]
Q6403	DTA123JK-T96	TRANSISTOR	[M]
QR1115	UNR221300L	TRANSISTOR	[M]
QR3521	UN2212TX	TRANSISTOR	[M]
QR3841	UN2212TX	TRANSISTOR	[M]
QR3842	UN2212TX	TRANSISTOR	[M]
QR3843	UN2212TX	TRANSISTOR	[M]
QR3844	UN2212TX	TRANSISTOR	[M]
QR3845	UN2111TX	TRANSISTOR	[M]
QR4401	UN2211TX	TRANSISTOR	[M]
QR4403	UN2211TX	TRANSISTOR	[M]
QR4404	UN2111TX	TRANSISTOR	[M]
QR5251	UN2121-TX	TRANSISTOR	[M]
QR6061	UN2215TX	TRANSISTOR	[M]
QR6062	UN2215TX	TRANSISTOR	[M]
QR6301	UN5212TX	TRANSISTOR	[M]
		DIODES	
D501	B3EA00000014	DIODE	[M]
D502	RSQGP1S53V	DIODE	[M]
D551	SG-206S	DIODE	[M]
D1002	D4EA7471A002	DIODE	[M] ⚠
D1011	B0EBKT000002	DIODE	[M] ⚠
D1031	AP01CV2	DIODE	[M]
D1041	AU01ZV2	DIODE	[M]
D1051	B0AACK000004	DIODE	[M]
D1052	B0AACK000004	DIODE	[M]
D1053	MA4022LTA	DIODE	[M]
D1054	AU01ZV2	DIODE	[M]
D1101	MA7075A-TR	DIODE	[M]
D1111	21DQ06FC4	DIODE	[M]
D1121	21DQ06FC4	DIODE	[M]
D1125	MA2J11100L	DIODE	[M]
D1131	11EQS10TA1	DIODE	[M]
D1132	MAZ71800AC	DIODE	[M]
D1141	11EQS10TA1	DIODE	[M]
D1151	11EQS10TA1	DIODE	[M]
D1152	11EQS10TA1	DIODE	[M]
D1161	AU01ZV2	DIODE	[M]
D1162	MAZ80300HL	DIODE	[M]
D1165	MAZ82400HL	DIODE	[M]
D1171	AK04V2	DIODE	[M]
D2001	MA2J11100L	DIODE	[M]
D3841	MA3X152A0L	DIODE	[M]
D4301	MAZ80470ML	DIODE	[M]
D5251	MA2J72800L	DIODE	[M]
D6061	B0JCME000025	DIODE	[M]
D6063	MAZ80680ML	DIODE	[M]
D6064	B0BC5R600003	DIODE	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
D6301	MA2SD2400L	DIODE	[M]
D6401	SLR325MCT31W	DIODE	[M]
D6402	B3ADA0000087	DIODE	[M]
D6403	SLR325VCT31	DIODE	[M]
LB2001	J0JHC0000045	CHIP CAPACITOR	[M]
LB2011	VLP0323A601R	CHIP INDUCTOR	[M]
LB2012	VLP0323A601R	CHIP INDUCTOR	[M]
LB2013	VLP0323A601R	CHIP INDUCTOR	[M]
LB2014	VLP0323A601R	CHIP INDUCTOR	[M]
LB2015	VLP0323A601R	CHIP INDUCTOR	[M]
LB2016	VLP0323A601R	CHIP INDUCTOR	[M]
LB2017	VLP0323A601R	CHIP INDUCTOR	[M]
LB2018	VLP0323A601R	CHIP INDUCTOR	[M]
LB2019	VLP0323A601R	CHIP INDUCTOR	[M]
LB2020	VLP0323A601R	CHIP INDUCTOR	[M]
LB2021	VLP0323A601R	CHIP INDUCTOR	[M]
LB2022	VLP0323A601R	CHIP INDUCTOR	[M]
LB2023	VLP0323A601R	CHIP INDUCTOR	[M]
LB2024	VLP0323A601R	CHIP INDUCTOR	[M]
LB2025	VLP0323A601R	CHIP INDUCTOR	[M]
LB2026	VLP0323A601R	CHIP INDUCTOR	[M]
LB2027	VLP0323A601R	CHIP INDUCTOR	[M]
LB2028	VLP0323A601R	CHIP INDUCTOR	[M]
LB2029	VLP0323A601R	CHIP INDUCTOR	[M]
LB2030	VLP0323A601R	CHIP INDUCTOR	[M]
LB2031	VLP0323A601R	CHIP INDUCTOR	[M]
LB2032	VLP0323A601R	CHIP INDUCTOR	[M]
LB2033	VLP0323A601R	CHIP INDUCTOR	[M]
LB2034	VLP0323A601R	CHIP INDUCTOR	[M]
LB2035	VLP0323A601R	CHIP INDUCTOR	[M]
LB2036	VLP0323A601R	CHIP INDUCTOR	[M]
LB2037	VLP0323A601R	CHIP INDUCTOR	[M]
LB2038	VLP0323A601R	CHIP INDUCTOR	[M]
LB2039	VLP0323A601R	CHIP INDUCTOR	[M]
LB2040	VLP0323A601R	CHIP INDUCTOR	[M]
LB2041	VLP0323A601R	CHIP INDUCTOR	[M]
LB2042	J0JHC0000045	CHIP CAPACITOR	[M]
LB2043	J0JHC0000045	CHIP CAPACITOR	[M]
LB3001	J0JHC0000045	CHIP CAPACITOR	[M]
LB3002	J0JHC0000045	CHIP CAPACITOR	[M]
LB3011	VLP0157-T	CHIP INDUCTOR	[M]
LB3201	VLP0155-T	CHIP BEAD	[M]
LB3202	D0GB101JA002	100 1/16W	[M]
LB3203	D0GB101JA002	100 1/16W	[M]
LB3204	D0GB101JA002	100 1/16W	[M]
LB3206	VLP0155-T	CHIP BEAD	[M]
LB3207	VLP0155-T	CHIP BEAD	[M]
LB3208	VLP0155-T	CHIP BEAD	[M]
LB3209	VLP0155-T	CHIP BEAD	[M]
LB3531	J0JBC0000015	CHIP INDUCTOR	[M]
LB3532	J0JBC0000015	CHIP INDUCTOR	[M]
LB3533	J0JBC0000015	CHIP INDUCTOR	[M]
LB3871	J0JBC0000015	CHIP INDUCTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB3872	J0JBC0000015	CHIP INDUCTOR	[M]
LB3873	J0JBC0000015	CHIP INDUCTOR	[M]
LB3874	J0JBC0000015	CHIP INDUCTOR	[M]
LB4200	VLP0323A601R	CHIP INDUCTOR	[M]
LB4201	VLP0323A601R	CHIP INDUCTOR	[M]
LB4214	VLP0323A601R	CHIP INDUCTOR	[M]
LB4215	VLP0323A601R	CHIP INDUCTOR	[M]
LB4216	VLP0323A601R	CHIP INDUCTOR	[M]
LB4217	VLP0323A601R	CHIP INDUCTOR	[M]
LB5201	JALBK2HS470T	CHIP INDUCTOR	[M]
LB5202	VLP0323A601R	CHIP INDUCTOR	[M]
LB5203	VLP0155-T	CHIP BEAD	[M]
LB5204	VLP0155-T	CHIP BEAD	[M]
LB5205	VLP0323A601R	CHIP INDUCTOR	[M]
LB5206	VLP0323A601R	CHIP INDUCTOR	[M]
LB6061	J0JBC0000015	CHIP INDUCTOR	[M]
LB6062	J0JBC0000015	CHIP INDUCTOR	[M]
LB6063	J0JBC0000015	CHIP INDUCTOR	[M]
LB6064	J0JBC0000015	CHIP INDUCTOR	[M]
LB6065	J0JBC0000015	CHIP INDUCTOR	[M]
LB6066	J0JBC0000015	CHIP INDUCTOR	[M]
LB6067	J0JBC0000015	CHIP INDUCTOR	[M]
LB6068	J0JBC0000015	CHIP INDUCTOR	[M]
LB6069	J0JBC0000015	CHIP INDUCTOR	[M]
LB6070	J0JBC0000015	CHIP INDUCTOR	[M]
LB6071	J0JBC0000015	CHIP INDUCTOR	[M]
LB6201	VLP0323A601R	CHIP INDUCTOR	[M]
LB6202	VLP0155-T	CHIP BEAD	[M]
LB6202	VLP0323A601R	CHIP INDUCTOR	[M]
LB6221	VLP0323A601R	CHIP INDUCTOR	[M]
LB6501	VLP0323A601R	CHIP INDUCTOR	[M]
LB6502	VLP0323A601R	CHIP INDUCTOR	[M]
LB6512	VLP0155-T	CHIP BEAD	[M]
LB6513	VLP0155-T	CHIP BEAD	[M]
LB6514	VLP0155-T	CHIP BEAD	[M]
LB6515	VLP0157-T	CHIP INDUCTOR	[M]
LR1041	VLP0392-T	CHIP INDUCTOR	[M]
		SWITCHES	
S551	RSH1A005-1U	SWITCH	[M]
S6401	EVQ11G07K	SW STOP	[M]
S6402	EVQ11G07K	SW PAUSE	[M]
S6403	EVQ11G07K	SW PLAY	[M]
S6404	EVQ11G07K	SW DISC EXCHANGE	[M]
S6405	EVQ11G07K	SW DISC SKIP	[M]
S6406	EVQ11G07K	SW REVERSE SKIP	[M]
S6407	EVQ11G07K	SW FORWARD SKIP	[M]
S6408	EVQ11G07K	SW OPEN/CLOSE	[M]
S6409	EVQ11G07K	SW POWER	[M]
S6410	EVQ11G07K	SW A.SRD	[M]
S6411	EVQ11G07K	SW CD SEQ	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		SWITCHES	
SW2501	RSH1A048-A	SW LEAF	[M]
		CONNECTORS	
CN501	RJS1A6714-Q	14P CONNECTOR	[M]
CN551	RJS2A1506	6P CONNECTOR	[M]
CN3501	RJS1A6819-J	CONNECTOR	[M]
CN3801	RJS1A6219-1	19P FFC CONNECTOR	[M]
CN6001	K1MN35A00001	FFC CONNECTOR	[M]
CN6002	RJS1A6814	FFC CONNECTOR	[M]
CN6003	RJS1A6606T1	TAPING CONNECTOR	[M]
CN6401	RJS1A6235-1	CONNECTOR	[M]
PS3201	K1KB22A00025	CONNECTOR	[M]
PS4201	K1KB14A00037	CONNECTOR	[M]
PS6201	K1MN10A00030	CONNECTOR	[M]
		COILS & TRANSFORMERS	
L1001	ELF15N003A	COIL	[M]
L1111	G0A100H00014	INDUCTOR	[M]
L1115	ELELN100KA	COIL	[M]
L1131	VLQEL05T330K	COIL	[M]
L1141	VLQEL05T330K	COIL	[M]
L1151	G0A220G00018	INDUCTOR	[M]
L2001	G1C100K00020	CHIP INDUCTOR	[M]
L3091	G1C100K00020	CHIP INDUCTOR	[M]
L3092	G1C100K00020	CHIP INDUCTOR	[M]
L3501	G0C220JA0019	CHIP CAPACITOR	[M]
L3505	ELJFCR68JF	CHIP INDUCTOR	[M]
L3861	ELESN220JA	COIL	[M]
L3871	G0C471JA0003	INDUCTOR	[M]
L3872	G0C471JA0003	INDUCTOR	[M]
L4211	G1C220KA0038	CHIP CAPACITOR	[M]
L5201	ELJEA100KF	CHIP INDUCTOR	[M]
L5202	ELJEA100KF	CHIP INDUCTOR	[M]
L5251	ELJEA100KF	CHIP INDUCTOR	[M]
L6001	RLQA101JT1-Y	AXIAL COIL	[M]
L6401	ELEPL221KA	INDUCTOR	[M]
L6501	G1C220KA0038	CHIP CAPACITOR	[M]
L6502	G1C220KA0038	CHIP CAPACITOR	[M]
T1021	ETS29AS136AC	TRANSFORMER	[M] ⚠
		OSCILLATORS	
X6001	EF0EC8004T4	CERAMIC OSCILLATOR	[M]
X6501	VSX1044	CRYSTAL OSCILLATOR	[M]
		DISPLAY TUBE	
FL3541	ELB4E043B	COIL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
FL4201	F1H0J1050018	1 6.3V	[M]
FL6251	F1H0J1050018	1 6.3V	[M]
FL6253	F1H0J1050018	1 6.3V	[M]
FL6254	F1H0J1050018	1 6.3V	[M]
FL6255	F1J1E1040022	0.1 25V	[M]
FL6401	A2BB00000099	FL DISPLAY	[M]
		FUSES	
F1001	K5D162BK0005	1.6A FUSE	[M] ⚠
		FUSE HOLDER	
FC502	RWJ4406087KK	6P FLAT CABLE	[M]
FC503	RWJ4403102KK	3P FLAT CABLE	[M]
FC6401	RWJ5705122SS	5P WIRE (PNL PCB)	[M]
		FUSE PROTECTOR	
FP2001	K1MN50A00005	CONNECTOR	[M]
FP5201	K1MN30B00098	CONNECTOR	[M]
FP5202	K1MN50B00010	CONNECTOR	[M]
PP3201	K1KA22A00046	22P CONNECTOR	[M]
PP4201	K1KA14A00135	14P CONNECTOR	[M]
ZA1001	EYF52BC	FUSE HOLDER	[M]
ZA1002	EYF52BC	FUSE HOLDER	[M]
ZA1111	K9ZZ00000424	TERMINAL	[M]
ZA3871	VMC1450	GROUND PLATE	[M]
ZA3872	VMC1450	GROUND PLATE	[M]
ZA4401	K9ZZ00000424	TERMINAL	[M]
ZA4402	K9ZZ00000424	TERMINAL	[M]
ZA4403	K9ZZ00000424	TERMINAL	[M]
ZA6001	K9ZZ00000424	TERMINAL	[M]
PR1171	VSF0015A10T	IC PROTECTOR	[M] ⚠
		JACKS	
JK3871	K1FB121A0004	JK COMBINED	[M]
JK4401	K2YZ06000017	JK COMBINED	[M]
P1001	K2AA2B000004	AC INLET	[M]
		RESISTORS	
R1	ERJ3GEY0R00V	0 1/16W	[M]
R2	ERJ3GEY0R00V	0 1/16W	[M]
R1002	ERC12AGM334C	330K 1/2W	[M] ⚠
R1031	ERDS2FJ224T	220K 1/4W	[M]
R1032	ERDS2FJ224T	220K 1/4W	[M]
R1041	ERDS2TJ334T	330K 1/4W	[M]
R1042	ERDS2TJ334T	330K 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R1043	ERG2SJ680P	68 2W	[M] ⚠
R1051	ERDS2TJ750T	75 1/4W	[M]
R1052	ERDS2TJ2R2T	2.2 1/4W	[M]
R1053	ERDS2TJ331T	330 1/4W	[M]
R1054	ER0S2THF6800	68 1/4W	[M]
R1101	D0GB750JA019	75 1/16W	[M]
R1102	D1BB1201A028	12 1/16W	[M]
R1103	D1BB1201A028	12 1/16W	[M]
R1104	ERJ3GEYJ561V	560 1/16W	[M]
R1105	ERJ3GEYJ561V	560 1/16W	[M]
R1106	D0GB392JA002	3.9K 1/16W	[M]
R1107	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1108	ERJ3GEYJ561V	560 1/16W	[M]
R1115	ERJ3GEYJ104V	100K 1/16W	[M]
R1116	ERJ3GEYJ102V	1K 1/16W	[M]
R1125	D0GB271JA002	270 1/16W	[M]
R1126	ERJ3GEYF182V	1.8K 1/16W	[M]
R1127	D1BB1201A028	12 1/16W	[M]
R1128	D0GB151JA008	150 1/16W	[M]
R1161	ERJ3GEYJ104V	100K 1/16W	[M]
R1165	ERD25FVJ100T	10 1/4W	[M]
R1166	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1175	ERG1SJ100E	10 1W	[M] ⚠
R2001	ERJ3GEYJ102V	1K 1/16W	[M]
R2011	D0GB332JA002	3.3K 1/16W	[M]
R2012	D0GB563JA002	56K 1/16W	[M]
R2013	ERJ3GEY0R00V	0 1/16W	[M]
R2014	D0GB332JA002	3.3K 1/16W	[M]
R2015	ERJ3GEYJ223V	22K 1/16W	[M]
R2016	ERJ3GEY0R00V	0 1/16W	[M]
R2017	D0GB332JA002	3.3K 1/16W	[M]
R2018	ERJ3GEYJ223V	22K 1/16W	[M]
R2019	D0GB332JA002	3.3K 1/16W	[M]
R2020	ERJ3GEYJ223V	22K 1/16W	[M]
R2021	D0GB332JA002	3.3K 1/16W	[M]
R2022	ERJ3GEYJ123V	12K 1/16W	[M]
R2023	D0GB332JA002	3.3K 1/16W	[M]
R2024	ERJ3GEYJ123V	12K 1/16W	[M]
R2026	ERJ3GEYJ473V	47K 1/16W	[M]
R2028	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2029	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2030	ERJ3GEYJ103V	10K 1/16W	[M]
R2031	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2032	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2033	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2034	D0GB183JA002	18K 1/16W	[M]
R2035	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2036	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2037	D0GB333JA002	33K 1/16W	[M]
R2038	ERJ3GEYJ102V	1K 1/16W	[M]
R2040	ERJ3GEY0R00V	0 1/16W	[M]
R2041	ERJ3GEYJ470V	47 1/16W	[M]
R2047	ERJ3GEYJ104V	100K 1/16W	[M]
R2048	ERJ3GEYJ104V	100K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R2051	ERJ3GEYJ104V	100K 1/16W	[M]
R2061	ERJ3GEYJ330V	33 1/16W	[M]
R2502	ERJ3GEYJ153V	15K 1/16W	[M]
R2503	ERJ3GEYJ153V	15K 1/16W	[M]
R2504	ERJ3GEYJ823V	82K 1/16W	[M]
R2505	ERJ3GEYJ823V	82K 1/16W	[M]
R2507	D0GF6R8JA017	6.8 1/8W	[M]
R3001	D0GB220JA002	22 1/16W	[M]
R3002	ERJ3GEYJ472V	4.7K 1/16W	[M]
R3003	D0GB101JA002	100 1/16W	[M]
R3004	ERJ3GEYJ221V	220 1/16W	[M]
R3005	ERJ3GEYJ473V	47K 1/16W	[M]
R3007	ERJ3GEY0R00V	0 1/16W	[M]
R3071	ERJ3GEYJ103V	10K 1/16W	[M]
R3080	ERJ3RBD752V	7.5K 3W	[M] ⚠
R3082	ERJ3RBD162V	1.6K 3W	[M] ⚠
R3083	ERJ3RBD112V	1.1K 3W	[M] ⚠
R3084	ERJ3RBD752V	7.5K 3W	[M] ⚠
R3085	ERJ3RBD183V	18K 3W	[M] ⚠
R3086	ERJ3RBD432V	4.3K 3W	[M] ⚠
R3087	ERJ3RBD752V	7.5K 3W	[M] ⚠
R3088	ERJ3RBD752V	7.5K 3W	[M] ⚠
R3089	ERJ3RBD822V	8.2K 3W	[M] ⚠
R3090	ERJ3RBD332V	3.3K 3W	[M] ⚠
R3091	D0GB101JA002	100 1/16W	[M]
R3092	D0GB101JA002	100 1/16W	[M]
R3101	ERJ3RED750V	75 3W	[M] ⚠
R3106	ERJ3RED750V	75 3W	[M] ⚠
R3111	ERJ3RBD221V	220 3W	[M] ⚠
R3112	ERJ3GEYJ330V	33 1/16W	[M]
R3113	ERJ3GEYJ102V	1K 1/16W	[M]
R3115	ERJ3RBD221V	220 3W	[M] ⚠
R3117	ERJ3GEYJ330V	33 1/16W	[M]
R3118	ERJ3GEYJ102V	1K 1/16W	[M]
R3201	ERJ3GEYJ221V	220 1/16W	[M]
R3202	ERJ3RBD272V	2.7K 3W	[M] ⚠
R3203	ERJ3RBD332V	3.3K 3W	[M] ⚠
R3204	ERJ3RBD102V	1K 3W	[M] ⚠
R3211	ERJ3RBD221V	220 3W	[M] ⚠
R3212	ERJ3GEYJ330V	33 1/16W	[M]
R3213	ERJ3GEYJ102V	1K 1/16W	[M]
R3501	ERJ3GEY0R00V	0 1/16W	[M]
R3502	ERJ3GEY0R00V	0 1/16W	[M]
R3521	ERJ3GEYJ222V	2.2K 1/16W	[M]
R3531	D1BB75R0A012	75 1/16W	[M]
R3532	D1BB75R0A012	75 1/16W	[M]
R3533	D1BB75R0A012	75 1/16W	[M]
R3541	ERJ3GEYJ561V	560 1/16W	[M]
R3542	D0GB183JA002	18K 1/16W	[M]
R3543	ERJ3GEYJ471V	470 1/16W	[M]
R3544	ERJ3GEYJ223V	22K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R3545	ERJ3GEYJ102V	1K 1/16W	[M]
R3551	ERJ3GEYJ561V	560 1/16W	[M]
R3552	D0GB183JA002	18K 1/16W	[M]
R3553	ERJ3GEYJ471V	470 1/16W	[M]
R3554	ERJ3GEYJ223V	22K 1/16W	[M]
R3555	ERJ3GEYJ102V	1K 1/16W	[M]
R3561	ERJ3GEYJ561V	560 1/16W	[M]
R3562	D0GB183JA002	18K 1/16W	[M]
R3563	ERJ3GEYJ471V	470 1/16W	[M]
R3564	ERJ3GEYJ223V	22K 1/16W	[M]
R3565	ERJ3GEYJ102V	1K 1/16W	[M]
R3801	D1BB1500A012	15 1/16W	[M]
R3802	D1BB1500A012	15 1/16W	[M]
R3803	D1BB1500A012	15 1/16W	[M]
R3804	D1BB1500A012	15 1/16W	[M]
R3821	D1BB1500A012	15 1/16W	[M]
R3822	D1BB1500A012	15 1/16W	[M]
R3823	ERJ3GEYG333V	33K 1/16W	[M]
R3824	ERJ3GEYG562V	5.6K 1/16W	[M]
R3841	ERJ3GEYJ472V	4.7K 1/16W	[M]
R3842	ERJ3GEYJ472V	4.7K 1/16W	[M]
R3843	D0GB183JA002	18K 1/16W	[M]
R3844	ERJ3GEYJ223V	22K 1/16W	[M]
R3845	ERJ3GEYJ472V	4.7K 1/16W	[M]
R3846	ERJ3GEYJ472V	4.7K 1/16W	[M]
R3847	ERJ3GEYJ471V	470 1/16W	[M]
R3848	ERJ3GEYJ223V	22K 1/16W	[M]
R3849	ERJ3GEYJ223V	22K 1/16W	[M]
R3850	ERJ3GEYJ102V	1K 1/16W	[M]
R3851	ERJ3GEYJ102V	1K 1/16W	[M]
R3852	ERJ3GEYJ102V	1K 1/16W	[M]
R3853	ERJ3GEYJ223V	22K 1/16W	[M]
R3871	D1BB75R0A012	75 1/16W	[M]
R3872	D1BB75R0A012	75 1/16W	[M]
R3873	D1BB75R0A012	75 1/16W	[M]
R3874	D1BB75R0A012	75 1/16W	[M]
R3875	D1BB75R0A012	75 1/16W	[M]
R3876	D1BB75R0A012	75 1/16W	[M]
R3877	ERJ3GEYJ221V	220 1/16W	[M]
R3878	ERJ3GEYJ221V	220 1/16W	[M]
R4201	ERJ3GEY0R00V	0 1/16W	[M]
R4301	ERJ3GEYJ222V	2.2K 1/16W	[M]
R4302	ERJ3GEYJ223V	22K 1/16W	[M]
R4303	ERJ3GEYJ223V	22K 1/16W	[M]
R4304	ERJ3GEYJ223V	22K 1/16W	[M]
R4311	ERJ3GEYJ104V	100K 1/16W	[M]
R4312	ERJ3GEYD562V	5.6K 1/16W	[M]
R4313	ERJ3GEYD123V	12K 1/16W	[M]
R4321	ERJ3GEYJ104V	100K 1/16W	[M]
R4322	ERJ3GEYD562V	5.6K 1/16W	[M]
R4323	ERJ3GEYD123V	12K 1/16W	[M]
R4391	D0GB683JA002	68K 1/16W	[M]
R4392	D0GB683JA002	68K 1/16W	[M]
R4393	ERJ3GEYJ473V	47K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R4395	D0GB333JA002	33K 1/16W	[M]
R4396	ERJ3GEYJ473V	47K 1/16W	[M]
R4401	ERJ3GEYJ222V	2.2K 1/16W	[M]
R4402	ERJ3GEYJ103V	10K 1/16W	[M]
R4403	D0GB332JA002	3.3K 1/16W	[M]
R4411	ERJ3GEYJ473V	47K 1/16W	[M]
R4412	D0GB821JA002	820 1/16W	[M]
R4413	D0GB821JA002	820 1/16W	[M]
R4414	ERJ3GEYJ221V	220 1/16W	[M]
R4415	D0GB821JA002	820 1/16W	[M]
R4416	D0GB821JA002	820 1/16W	[M]
R4421	ERJ3GEYJ473V	47K 1/16W	[M]
R4422	D0GB821JA002	820 1/16W	[M]
R4423	D0GB821JA002	820 1/16W	[M]
R4424	ERJ3GEYJ221V	220 1/16W	[M]
R4425	D0GB821JA002	820 1/16W	[M]
R4426	D0GB821JA002	820 1/16W	[M]
R4441	ERJ3GEYJ473V	47K 1/16W	[M]
R4442	D0GB821JA002	820 1/16W	[M]
R4443	D0GB821JA002	820 1/16W	[M]
R4444	ERJ3GEYJ221V	220 1/16W	[M]
R4445	D0GB821JA002	820 1/16W	[M]
R4446	D0GB821JA002	820 1/16W	[M]
R4447	ERJ3GEY0R00V	0 1/16W	[M]
R4485	D0GB332JA002	3.3K 1/16W	[M]
R4487	D0GB332JA002	3.3K 1/16W	[M]
R5203	D0GB563JA002	56K 1/16W	[M]
R5204	ERJ3GEYJ223V	22K 1/16W	[M]
R5211	ERJ3GEYJ2R2V	2.2 1/16W	[M]
R5212	ERJ12YJ270H	27 1/2W	[M] ⚠
R5213	ERJ3GEYJ473V	47K 1/16W	[M]
R5214	ERJ3GEYJ223V	22K 1/16W	[M]
R5215	ERJ3GEYJ2R2V	2.2 1/16W	[M]
R5216	ERJ12YJ270H	27 1/2W	[M] ⚠
R5217	ERJ3GEYJ473V	47K 1/16W	[M]
R5221	ERJ3GEYJ822V	8.2K 1/16W	[M]
R5222	ERJ3GEYJ822V	8.2K 1/16W	[M]
R5232	ERJ3RBD123V	12K 3W	[M] ⚠
R5235	D0GB105JA002	1M 1/16W	[M]
R5236	ERJ3GEY0R00V	0 1/16W	[M]
R5252	ERJ3GEYJ102V	1K 1/16W	[M]
R6011	ERJ3GEYJ473V	47K 1/16W	[M]
R6012	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6021	ERJ3GEYJ103V	10K 1/16W	[M]
R6022	ERJ3GEYJ103V	10K 1/16W	[M]
R6023	ERJ3GEYJ103V	10K 1/16W	[M]
R6024	ERJ3GEY0R00V	0 1/16W	[M]
R6025	D0GB302JA008	1K 1/16W	[M]
R6026	ERJ3GEY0R00V	0 1/16W	[M]
R6031	ERJ3GEYJ103V	10K 1/16W	[M]
R6032	ERJ3GEYJ103V	10K 1/16W	[M]
R6033	ERJ3GEYJ103V	10K 1/16W	[M]
R6061	ERJ3GEYJ681V	680 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R6062	ERJ3GEYJ681V	680 1/16W	[M]
R6063	ERJ3GEYJ681V	680 1/16W	[M]
R6065	ERJ3GEYJ681V	680 1/16W	[M]
R6066	ERJ3GEYJ681V	680 1/16W	[M]
R6067	ERJ3GEYJ681V	680 1/16W	[M]
R6071	ERJ3GEYJ103V	10K 1/16W	[M]
R6072	ERJ3GEYJ102V	1K 1/16W	[M]
R6073	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6074	ERJ3GEYJ223V	22K 1/16W	[M]
R6081	ERJ3GEYJ473V	47K 1/16W	[M]
R6082	ERJ3GEYJ473V	47K 1/16W	[M]
R6083	ERJ3GEYJ473V	47K 1/16W	[M]
R6084	ERJ3GEYJ473V	47K 1/16W	[M]
R6085	ERJ3GEYJ473V	47K 1/16W	[M]
R6086	ERJ3GEYJ473V	47K 1/16W	[M]
R6091	ERJ3GEYJ103V	10K 1/16W	[M]
R6201	ERJ3GEYJ103V	10K 1/16W	[M]
R6205	ERJ3GEYJ102V	1K 1/16W	[M]
R6206	ERJ3GEYJ103V	10K 1/16W	[M]
R6208	ERJ3GEYJ102V	1K 1/16W	[M]
R6301	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6303	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6401	ERJ3GEYJ102V	1K 1/16W	[M]
R6402	ERJ3GEYJ102V	1K 1/16W	[M]
R6403	ERJ3GEYJ102V	1K 1/16W	[M]
R6404	D0GB680JA019	68 1/16W	[M]
R6405	D0GB680JA019	68 1/16W	[M]
R6406	D0GB680JA019	68 1/16W	[M]
R6407	D0GB821JA002	820 1/16W	[M]
R6408	ERJ3GEYJ102V	1K 1/16W	[M]
R6409	D0GB122JA019	1.2K 1/16W	[M]
R6410	D0GB152JA002	1.5K 1/16W	[M]
R6411	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6412	D0GB821JA002	820 1/16W	[M]
R6413	ERJ3GEYJ102V	1K 1/16W	[M]
R6414	D0GB821JA002	820 1/16W	[M]
R6415	ERJ3GEYJ102V	1K 1/16W	[M]
R6416	D0GB122JA019	1.2K 1/16W	[M]
R6417	D0GB152JA002	1.5K 1/16W	[M]
R6484	D0GB680JA019	68 1/16W	[M]
R6485	D0GB680JA019	68 1/16W	[M]
R6486	D0GB680JA019	68 1/16W	[M]
R6494	D0GB680JA019	68 1/16W	[M]
R6495	D0GB680JA019	68 1/16W	[M]
R6496	D0GB680JA019	68 1/16W	[M]
R6512	ERJ3RBD331V	330 3W	[M] ⚠
R6513	ERJ3GEYJ103V	10K 1/16W	[M]
R6514	ERJ3GEYJ470V	47 1/16W	[M]
R6515	D0GB100JA002	10 1/16W	[M]
K3001	ERJ3GEY0R00V	0 1/16W	[M]
K3011	ERJ3GEY0R00V	0 1/16W	[M]
K3012	ERJ3GEY0R00V	0 1/16W	[M]
K3013	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
K3071	ERJ3GEY0R00V	0 1/16W	[M]
K3101	ERJ3GEY0R00V	0 1/16W	[M]
K3106	ERJ3GEY0R00V	0 1/16W	[M]
K3201	ERJ3GEY0R00V	0 1/16W	[M]
K3502	ERJ3GEY0R00V	0 1/16W	[M]
K3503	ERJ3GEY0R00V	0 1/16W	[M]
K3505	ERJ3GEY0R00V	0 1/16W	[M]
K3507	ERJ3GEY0R00V	0 1/16W	[M]
K4001	ERJ3GEY0R00V	0 1/16W	[M]
K4002	ERJ3GEY0R00V	0 1/16W	[M]
K4003	ERJ3GEY0R00V	0 1/16W	[M]
K4031	ERJ3GEY0R00V	0 1/16W	[M]
K6091	ERJ3GEY0R00V	0 1/16W	[M]
K6092	ERJ3GEY0R00V	0 1/16W	[M]
K6093	ERJ3GEY0R00V	0 1/16W	[M]
K6201	ERJ3GEY0R00V	0 1/16W	[M]
K6251	ERJ6GEY0R00V	0 1/10W	[M]
K6301	ERJ3GEY0R00V	0 1/16W	[M]
RA2061	EXBV4V330JV	33 1/16W	[M]
RA2501	EXBV8V473JV	47K 1/16W	[M]
RA3008	EXBV4V103JV	10K 1/16W	[M]
RA3009	EXBV4V221JV	220 1/16W	[M]
RA3011	EXBV4V473JV	47K 1/16W	[M]
RA3012	EXBV8V331JV	330 1/16W	[M]
RA3013	EXBV8V331JV	330 1/16W	[M]
RA3203	EXBV4V101JV	100 1/16W	[M]
RA5231	EXBV8V101JV	100 1/16W	[M]
RA6201	EXBV4V103JV	10K 1/16W	[M]
RA6202	EXBV4V103JV	10K 1/16W	[M]
RA6203	EXBV4V103JV	10K 1/16W	[M]
RA6204	EXBV4V103JV	10K 1/16W	[M]
RA6205	EXBV8V473JV	47K 1/16W	[M]
RA6206	EXBV4V103JV	10K 1/16W	[M]
RA6207	EXBV4V472JV	4.7K 1/16W	[M]
		CAPACITORS	
C1001	ECQU2A104MLC	0.1 100V	[M]
C1002	ECQU2A104MLC	0.1 100V	[M]
C1003	VCK0286B471	86 250V	[M]
C1005	VCK0286E102	86 250V	[M]
C1011	ECA2WHG330E	33 450V	[M]
C1012	ECA2WHG100B	10 450V	[M]
C1021	F1B3D221A002	220P 20V	[M]
C1031	F1B2H1820001	1800P 500V	[M]
C1041	ECQB1H223JF4	0.022 50V	[M]
C1051	ECQB1H104JF4	0.1 50V	[M]
C1052	ECQB1H683JF4	0.068 50V	[M]
C1053	ECQB1H104JF4	0.1 50V	[M]
C1101	ECQV1H104JL2	0.1 50V	[M]
C1102	ECQB1H223JF4	0.022 50V	[M]
C1111	VCEA1AJH102B	1000P 10V	[M]
C1112	VCEA1AJC102B	1000P 10V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1115	ECUV1E104ZFV	0.1 25V	[M]
C1116	ECA1AM221B	220 10V	[M]
C1117	ECA0JM102B	1000P 6.3V	[M]
C1121	VCEA1AJH102B	1000P 10V	[M]
C1125	ECUV1E104ZFV	0.1 25V	[M]
C1126	ECJ1VB1H102K	1000P 50V	[M]
C1127	ECA0JM102B	1000P 6.3V	[M]
C1131	VCEA1EJH181B	180P 25V	[M]
C1141	VCEA1EJH181B	180P 25V	[M]
C1151	VCEA1EJH271B	270P 25V	[M]
C1153	VCEA1EJC221B	220P 25V	[M]
C1154	ECA1AM221B	220 10V	[M]
C1161	VCEA1HJH560B	56P 50V	[M]
C1165	ECJ1VB1H103K	0.01 50V	[M]
C1166	ECA1CM100B	10 16V	[M]
C1171	VCEA1AJH181B	180P 10V	[M]
C2001	F2G0J331A015	330P 6.3V	[M]
C2002	EEVHB0J101P	100P 6.3V	[M]
C2003	ECUVNC104ZFV	0.1 16V	[M]
C2004	ECUVNC104ZFV	0.1 16V	[M]
C2005	ECUVNC104ZFV	0.1 16V	[M]
C2006	ECUVNC104ZFV	0.1 16V	[M]
C2007	ECUVNC104ZFV	0.1 16V	[M]
C2008	ECUVNC104ZFV	0.1 16V	[M]
C2009	ECUVNC104ZFV	0.1 16V	[M]
C2010	ECUVNC104ZFV	0.1 16V	[M]
C2011	ECUVNC104ZFV	0.1 16V	[M]
C2015	ECUVNC104ZFV	0.1 16V	[M]
C2021	F1H1H822A022	8200P 50V	[M]
C2022	F1H1C393A089	0.039 16V	[M]
C2023	ECJ1VB1H681K	680P 50V	[M]
C2024	ECJ1VB1H681K	680P 50V	[M]
C2025	F1H1C473A088	0.047 16V	[M]
C2026	F1H1C473A088	0.047 16V	[M]
C2027	ECJ1VB1H332K	3300P 50V	[M]
C2028	ECUV1H152KBV	1500P 50V	[M]
C2029	ECUV1H152KBV	1500P 50V	[M]
C2030	ECJ1VB1H471K	470P 50V	[M]
C2031	ECJ1VB1H332K	3300P 50V	[M]
C2032	F1H1C473A088	0.047 16V	[M]
C2033	ECJ1VB1H332K	3300P 50V	[M]
C2034	ECUVNC104KBV	0.1 16V	[M]
C2035	F1H1C473A088	0.047 16V	[M]
C2036	ECJ1VB1H332K	3300P 50V	[M]
C2037	ECJ1VB1H102K	1000P 50V	[M]
C2038	F1H1A474A025	0.47 10V	[M]
C2039	ECJ1VB1H103K	0.01 50V	[M]
C2041	F1J1A2250007	22 10V	[M]
C2042	ECUVNC104KBV	0.1 16V	[M]
C2043	ECUVNC104KBV	0.1 16V	[M]
C2044	ECUVNC104ZFV	0.1 16V	[M]
C2045	ECUV1H101JCV	100P 50V	[M]
C2046	ECUV1C333KBV	0.033 16V	[M]
C2047	ECUVNC104KBV	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2048	ECJ1VB1H332K	3300P 50V	[M]
C2051	ECJ1VB1H103K	0.01 50V	[M]
C2052	ECJ1VB1H102K	0.01 50V	[M]
C2061	RCST1AY106RE	10 10V	[M]
C2062	ECUVNC104ZFV	0.1 16V	[M]
C2063	ECUVNC104ZFV	0.1 16V	[M]
C2064	ECUVNC104ZFV	0.1 16V	[M]
C2501	EEVFC0J221P	220P 6.3V	[M]
C2502	ECEV1CA101WP	100 16V	[M]
C2503	ECEV1CA220WR	22 16V	[M]
C2504	ECUVNC104ZFV	0.1 16V	[M]
C2505	ECUVNC104ZFV	0.1 16V	[M]
C2506	ECUVNC104ZFV	0.1 16V	[M]
C2507	ECUVNC104ZFV	0.1 16V	[M]
C2508	ECUVNC104ZFV	0.1 16V	[M]
C2509	EEVFC1C100R	10P 16V	[M]
C2511	ECUVNC104ZFV	0.1 16V	[M]
C2512	ECUVNC104ZFV	0.1 16V	[M]
C2513	ECUVNC104ZFV	0.1 16V	[M]
C3001	F2G0J331A015	330P 6.3V	[M]
C3002	EEVFC0J221P	220P 6.3V	[M]
C3004	ECJ1VF1A105Z	1 10V	[M]
C3005	ECUVNC104ZFV	0.1 16V	[M]
C3006	ECUVNC104ZFV	0.1 16V	[M]
C3007	ECJ1VF1A105Z	1 10V	[M]
C3008	ECJ1VF1A105Z	1 10V	[M]
C3009	ECUVNC104ZFV	0.1 16V	[M]
C3010	ECUVNC104ZFV	0.1 16V	[M]
C3011	ECUVNC104ZFV	0.1 16V	[M]
C3012	ECJ1VF1A105Z	1 10V	[M]
C3013	ECJ1VF1A105Z	1 10V	[M]
C3014	ECUVNC104ZFV	0.1 16V	[M]
C3015	ECUVNC104ZFV	0.1 16V	[M]
C3016	ECJ1VF1A105Z	1 10V	[M]
C3017	ECUVNC104ZFV	0.1 16V	[M]
C3018	ECUVNC104ZFV	0.1 16V	[M]
C3019	ECJ1VF1A105Z	1 10V	[M]
C3020	ECJ1VF1A105Z	1 10V	[M]
C3021	ECUVNC104ZFV	0.1 16V	[M]
C3022	ECUVNC104ZFV	0.1 16V	[M]
C3023	ECUVNC104ZFV	0.1 16V	[M]
C3024	ECJ1VF1A105Z	1 10V	[M]
C3025	ECUVNC104ZFV	0.1 16V	[M]
C3026	ECJ1VF1A105Z	1 10V	[M]
C3027	ECUVNC104ZFV	0.1 16V	[M]
C3028	ECUVNC104ZFV	0.1 16V	[M]
C3029	ECUVNC104ZFV	0.1 16V	[M]
C3030	ECJ1VF1A105Z	1 10V	[M]
C3031	ECUVNC104ZFV	0.1 16V	[M]
C3032	ECUVNC104ZFV	0.1 16V	[M]
C3033	ECUVNC104ZFV	0.1 16V	[M]
C3034	ECUVNC104ZFV	0.1 16V	[M]
C3035	ECUVNC104ZFV	0.1 16V	[M]
C3036	ECJ1VC1H220J	22P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C3041	ECUVNC104ZFV	0.1 16V	[M]
C3042	ECUVNC104ZFV	0.1 16V	[M]
C3043	ECUVNC104ZFV	0.1 16V	[M]
C3044	ECUVNC104ZFV	0.1 16V	[M]
C3045	ECUVNC104ZFV	0.1 16V	[M]
C3060	ECUVNC104ZFV	0.1 16V	[M]
C3061	ECUVNC104ZFV	0.1 16V	[M]
C3062	ECUVNC104ZFV	0.1 16V	[M]
C3063	ECUVNC104ZFV	0.1 16V	[M]
C3064	ECUVNC104ZFV	0.1 16V	[M]
C3065	ECJ1VF1A105Z	1 10V	[M]
C3066	ECUVNC104ZFV	0.1 16V	[M]
C3071	ECUVNC104ZFV	0.1 16V	[M]
C3072	ECUVNC104ZFV	0.1 16V	[M]
C3073	ECUVNC104ZFV	0.1 16V	[M]
C3074	ECUVNC104ZFV	0.1 16V	[M]
C3075	ECJ1VF1A105Z	1 10V	[M]
C3076	ECUVNC104ZFV	0.1 16V	[M]
C3080	F2G0J331A015	330P 6.3V	[M]
C3081	ECUVNC104ZFV	0.1 16V	[M]
C3082	ECUVNC104ZFV	0.1 16V	[M]
C3083	F1H0J1050013	10 6.3V	[M]
C3084	F1H0J1050013	10 6.3V	[M]
C3085	F1H0J1050013	10 6.3V	[M]
C3086	F1H0J1050013	10 6.3V	[M]
C3087	ECUVNC104ZFV	0.1 16V	[M]
C3088	ECUVNC104ZFV	0.1 16V	[M]
C3089	ECUVNC104ZFV	0.1 16V	[M]
C3100	EEVHB0J101P	100P 6.3V	[M]
C3111	ECUVNC104ZFV	0.1 16V	[M]
C3116	ECUVNC104ZFV	0.1 16V	[M]
C3201	EEVHB0G101R	100P 4V	[M]
C3202	ECUVNC104ZFV	0.1 16V	[M]
C3203	ECUVNC104ZFV	0.1 16V	[M]
C3204	ECUVNC104ZFV	0.1 16V	[M]
C3205	ECUVNC104ZFV	0.1 16V	[M]
C3206	ECUVNC104ZFV	0.1 16V	[M]
C3207	ECUV1C104KBV	0.1 16V	[M]
C3208	ECJ2YB1A105K	1 10V	[M]
C3209	ECUVNC104ZFV	0.1 16V	[M]
C3210	ECUVNC104ZFV	0.1 16V	[M]
C3211	ECUVNC104ZFV	0.1 16V	[M]
C3215	ECUVNC104ZFV	0.1 16V	[M]
C3501	ECA0JM221B	220 6.3V	[M]
C3502	F1H1H103A753	0.01 50V	[M]
C3503	F1H1H103A753	0.01 50V	[M]
C3504	ECJ1VB1H103K	0.01 50V	[M]
C3505	ECEA1CKS470I	47 16V	[M]
C3509	ECA0JM102B	1000P 6.3V	[M]
C3510	ECEA0JKA101B	100 6.3V	[M]
C3511	ECA0JM102B	1000P 6.3V	[M]
C3512	ECEA0JKA101B	100 6.3V	[M]
C3520	ECUV1H101JCV	100P 50V	[M]
C3531	ECJ1VB1H103K	0.01 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C3532	F1H1H103A753	0.01 50V	[M]
C3533	F1H1H103A753	0.01 50V	[M]
C3541	F1H1H103A753	0.01 50V	[M]
C3551	F1H1H103A753	0.01 50V	[M]
C3561	ECJ1VF1H103Z	0.01 50V	[M]
C3801	ECEA1HKA010B	1 50V	[M]
C3802	ECEA1HKA010B	1 50V	[M]
C3803	ECUV1C104ZFV	0.1 16V	[M]
C3821	ECEA1HKA010B	1 50V	[M]
C3822	ECUV1C104ZFV	0.1 16V	[M]
C3823	ECUV1C104ZFV	0.1 16V	[M]
C3824	ECEA0JKA101B	100 6.3V	[M]
C3825	ECEA1CKA220B	22 16V	[M]
C3826	ECEA0JKA101B	100 6.3V	[M]
C3827	ECEA1CKA220B	22 16V	[M]
C3828	ECEA0JKA101B	100 6.3V	[M]
C3829	ECEA1CKA220B	22 16V	[M]
C3861	ECEA1CKA101B	100 16V	[M]
C3862	ECUV1C104ZFV	0.1 16V	[M]
C3863	ECEA1CKA101B	100 16V	[M]
C3864	ECUV1C104ZFV	0.1 16V	[M]
C3871	ECUV1H101JCV	100P 50V	[M]
C3872	ECUV1H101JCV	100P 50V	[M]
C3873	ECUV1H101JCV	100P 50V	[M]
C3874	ECUV1H101JCV	100P 50V	[M]
C4201	F2G0J331A015	330P 6.3V	[M]
C4202	RCST1AY106RE	10 10V	[M]
C4206	F2G0J330A015	33P 6.3V	[M]
C4207	ECUVNC104ZFV	0.1 16V	[M]
C4208	ECUVNC104ZFV	0.1 16V	[M]
C4209	ECUVNC104ZFV	0.1 16V	[M]
C4210	ECUVNC104ZFV	0.1 16V	[M]
C4218	ECUVNC104ZFV	0.1 16V	[M]
C4301	ECA0JM102B	1000P 6.3V	[M]
C4304	ECA1EM221B	220 25V	[M]
C4305	ECA1EM221B	220 25V	[M]
C4308	ECUV1E104ZFV	0.1 25V	[M]
C4309	ECA1CAD470XI	47 16V	[M]
C4311	ECA1CAD470XI	47 16V	[M]
C4312	ECUV1H101JCV	100P 50V	[M]
C4313	ECUV1E104ZFV	0.1 25V	[M]
C4314	ECUV1E104ZFV	0.1 25V	[M]
C4321	ECA1CAD470XI	47 16V	[M]
C4322	ECUV1H101JCV	100P 50V	[M]
C4391	ECJ1VB1C223K	0.022 16V	[M]
C4392	ECUV1E104ZFV	0.1 25V	[M]
C4393	ECUV1E104ZFV	0.1 25V	[M]
C4395	ECJ1VB1C223K	0.022 16V	[M]
C4401	ECUV1E104ZFV	0.1 25V	[M]
C4405	ECUV1E104ZFV	0.1 25V	[M]
C4406	ECUV1E104ZFV	0.1 25V	[M]
C4407	ECUV1E104ZFV	0.1 25V	[M]
C4409	ECUV1E104ZFV	0.1 25V	[M]
C4411	ECA1CAD470XI	47 16V	[M]

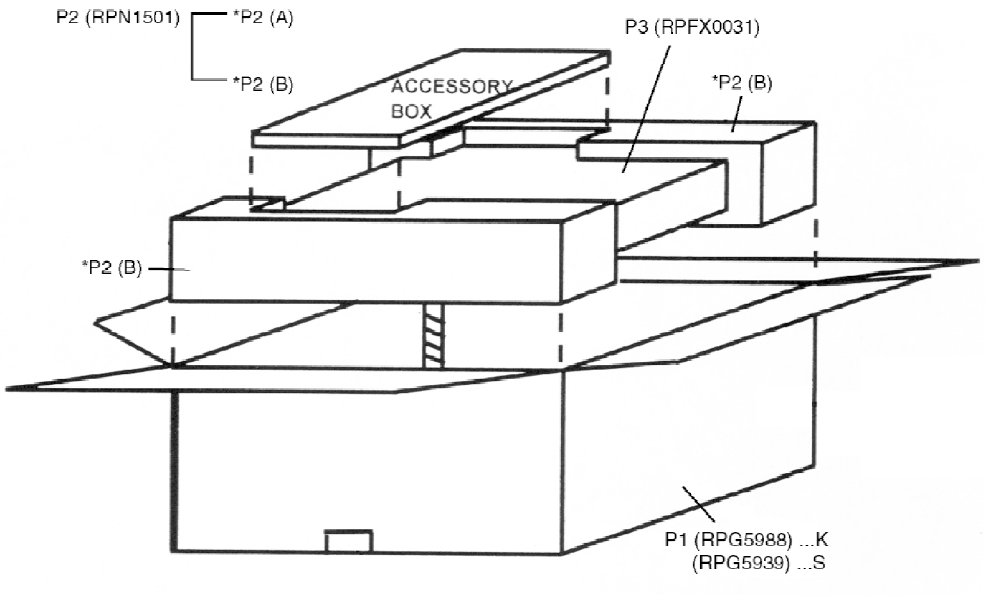
Ref. No.	Part No.	Part Name & Description	Remarks
C4412	ECJ1VC1H102J	1000P 50V	[M]
C4421	ECA1CAD470XI	47 16V	[M]
C4422	ECJ1VC1H102J	1000P 50V	[M]
C4441	ECA1ANK470XI	47 10V	[M]
C4442	ECJ1VC1H102J	1000P 50V	[M]
C4491	ECEA1HKA4R7B	4.7 50V	[M]
C4492	ECUV1E104ZFV	0.1 25V	[M]
C5201	EEVHB1C100R	10P 16V	[M]
C5202	EEVHB1C100R	10P 16V	[M]
C5203	ECUVNC104ZFV	0.1 16V	[M]
C5204	ECUVNC104ZFV	0.1 16V	[M]
C5205	ECJ1VC1H102J	1000P 50V	[M]
C5206	ECJ1VC1H102J	1000P 50V	[M]
C5207	ECJ1VC1H102J	1000P 50V	[M]
C5208	ECJ1VC1H102J	1000P 50V	[M]
C5211	EEVHB0J470R	47P 6.3V	[M]
C5215	EEVHB0J470R	47P 6.3V	[M]
C5221	ECUVNC104ZFV	0.1 16V	[M]
C5223	ECUVNC104ZFV	0.1 16V	[M]
C5224	ECUVNC104KBV	0.1 16V	[M]
C5225	ECUVNC104KBV	0.1 16V	[M]
C5231	ECUV1H101JCV	100P 50V	[M]
C5232	ECUVNC104ZFV	0.1 16V	[M]
C5233	ECUVNC104ZFV	0.1 16V	[M]
C5234	ECJ1VB1H222K	2200P 50V	[M]
C5235	F1H1H391A765	390P 50V	[M]
C5236	ECJ1VC1H102J	1000P 50V	[M]
C5237	ECUVNC104KBV	0.1 16V	[M]
C5238	F1H1A2240004	0.22 10V	[M]
C5239	ECUVNC104KBV	0.1 16V	[M]
C5240	F1H1H561A765	560P 50V	[M]
C5242	ECJ1VB1H472K	4700P 50V	[M]
C5251	ECUVNC104ZFV	0.1 16V	[M]
C5252	VCS1AS106R	10 10V	[M]
C5253	ERJ3GEYJ472V	4.7K 1/16W	[M]
C6001	ECEA0JKA331Q	330 6.3V	[M]
C6002	ECUVNC104ZFV	0.1 16V	[M]
C6004	ECEA1HKA330B	33 50V	[M]
C6011	ECEA0JKA331Q	330 6.3V	[M]
C6012	ECUVNC104ZFV	0.1 16V	[M]
C6031	F1H1H103A753	0.01 50V	[M]
C6032	F1H1H103A753	0.01 50V	[M]
C6033	F1H1H103A753	0.01 50V	[M]
C6041	F1H1H331A022	330P 50V	[M]
C6042	F1H1H331A022	330P 50V	[M]
C6061	ECEA1CKS470I	47 16V	[M]
C6065	ECJ1VB1H103K	0.01 50V	[M]
C6201	EEVHB0J330R	33 6.3V	[M]
C6202	ECUVNC104ZFV	0.1 16V	[M]
C6203	ECUVNC104ZFV	0.1 16V	[M]
C6204	ECUVNC104ZFV	0.1 16V	[M]
C6205	ECUVNC104ZFV	0.1 16V	[M]
C6206	ECUVNC104ZFV	0.1 16V	[M]
C6211	ECUV1H101JCV	100P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C6221	ECUVNC104ZFV	0.1 16V	[M]
C6222	ECUVNC104ZFV	0.1 16V	[M]
C6251	ECUVNC104KBV	0.1 16V	[M]
C6253	RCST1AY106RE	10 10V	[M]
C6257	EEVHB0J101P	100P 6.3V	[M]
C6301	ECUVNC104ZFV	0.1 16V	[M]
C6302	ECUVNC104KBV	0.1 16V	[M]
C6303	ECUVNC104ZFV	0.1 16V	[M]
C6304	ECUVNC104ZFV	0.1 16V	[M]
C6305	ECUVNC104ZFV	0.1 16V	[M]
C6401	ECEA0JKA470B	47 6.3V	[M]
C6402	F1H1H103A753	0.01 50V	[M]
C6501	EEVHB0J330R	33 6.3V	[M]
C6502	EEVHB0J330R	33 6.3V	[M]
C6503	ECUVNC104ZFV	0.1 16V	[M]
C6504	ECUVNC104ZFV	0.1 16V	[M]
C6505	ECUVNC104ZFV	0.1 16V	[M]
C6511	ECJ1VC1H150J	15P 50V	[M]
C6512	ECJ1VC1H150J	15P 50V	[M]

19.4. Packing Materials & Accessories Parts List

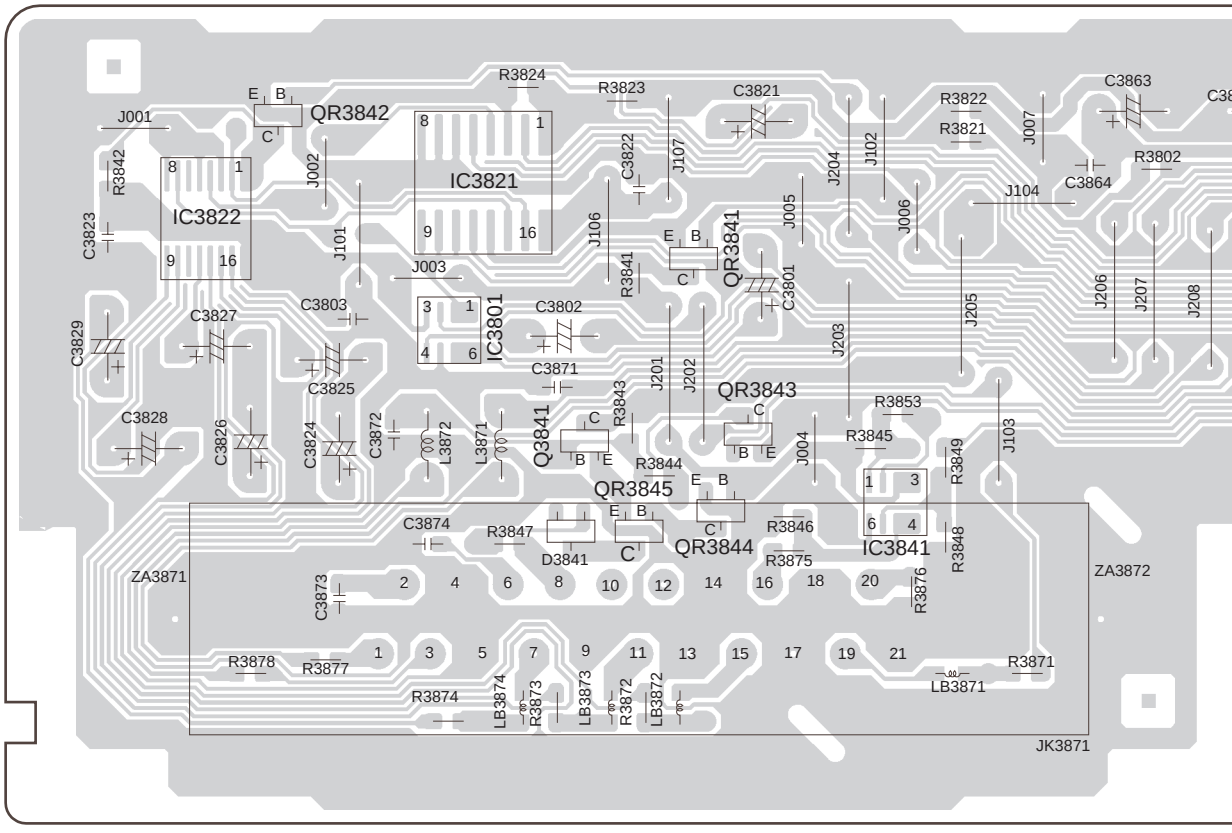
Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG5988	PACKING CASE	[M]K
P1	RPG5939	PACKING CASE	[M]S
P2	RPN1501	POLYFOAM	[M]
P3	RPFX0031	MIRAMAT BAG	[M]
		ACCESSORIES	
A1	N2QAJB000039	REMOTE CONTROL	[M]
A1-1	RKK-HTR0283H	R/C BATTERY COVER	[M]
A2	RJA0019-2X	AC CORD	[M]EG E ⚠
A2	RJA0053-2X	AC CORD	[M]EB ⚠
A3	RQT6437-D	O/I BOOK	[M]EG
A3	RQT6438-E	O/I BOOK	[M]E
A3	RQT6439-B	O/I BOOK	[M]EB E
A4	K2KA6CA00001	A/V CORD	[M]

19.5. Packaging

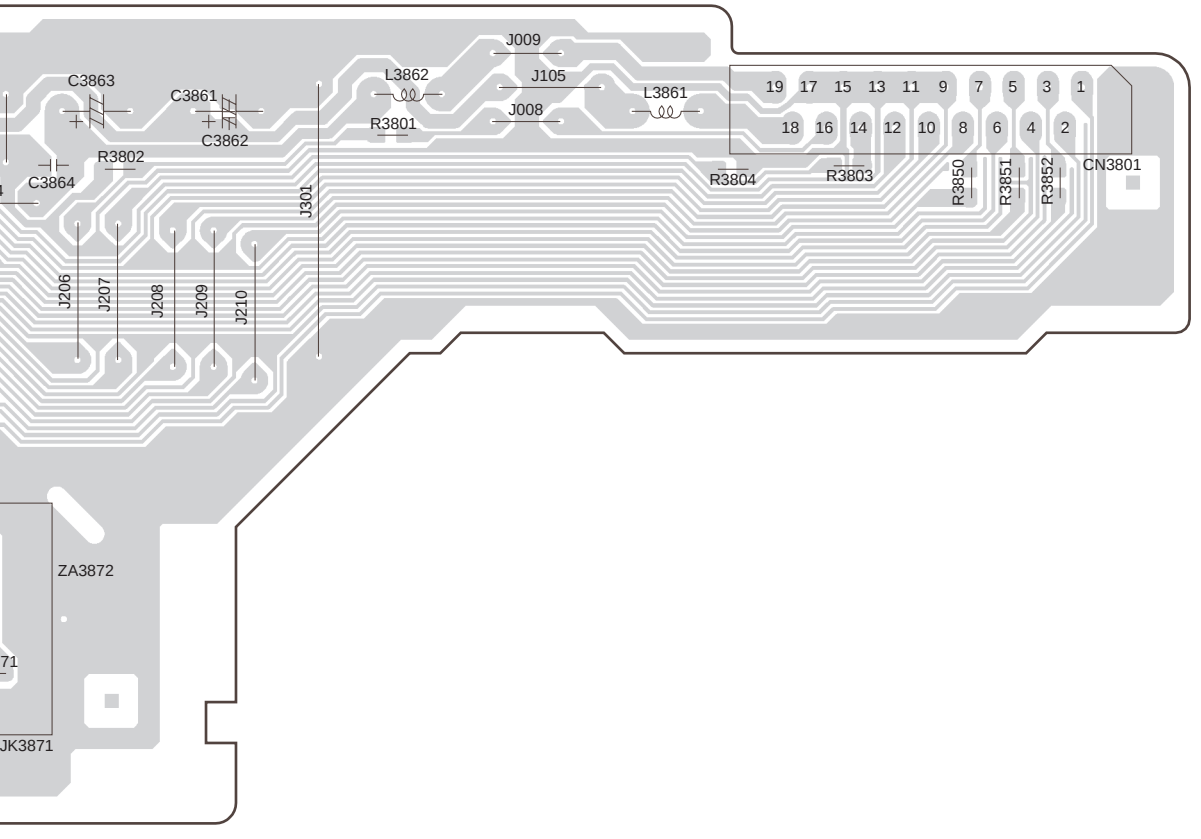


Printed in Singapore / P020400001 J/K/E/O/L

J SCART P.C.B. (REP3321A)



AV1


G
H
I
J
K
L
M
J009
C3863
L3862
J105
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L3861
J008
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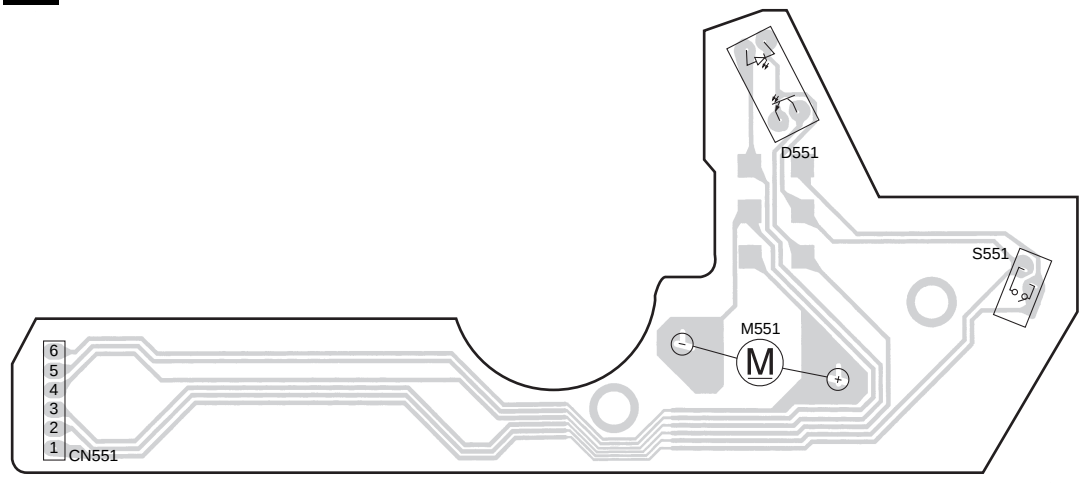
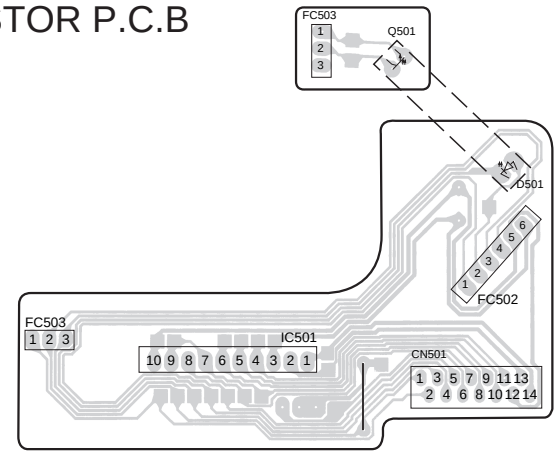
R3801
19 17 15 13 11 9 7 5 3 1
18 16 14 12 10 8 6 4 2
R3802
C3864
R3804
R3803
R3850
R3851
R3852
CN3801
J301
J206
J207
J208
J209
J210
ZA3872
JK3871

I LOADING MOTOR (REPX0095A-N)

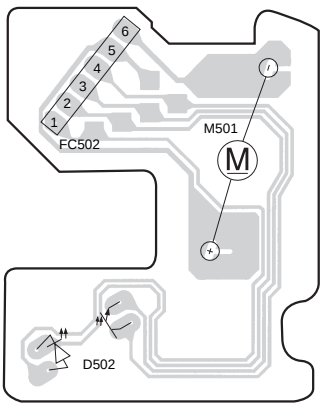


H PHOTO TRANSISTOR P.C.B (REPX0096A-N)

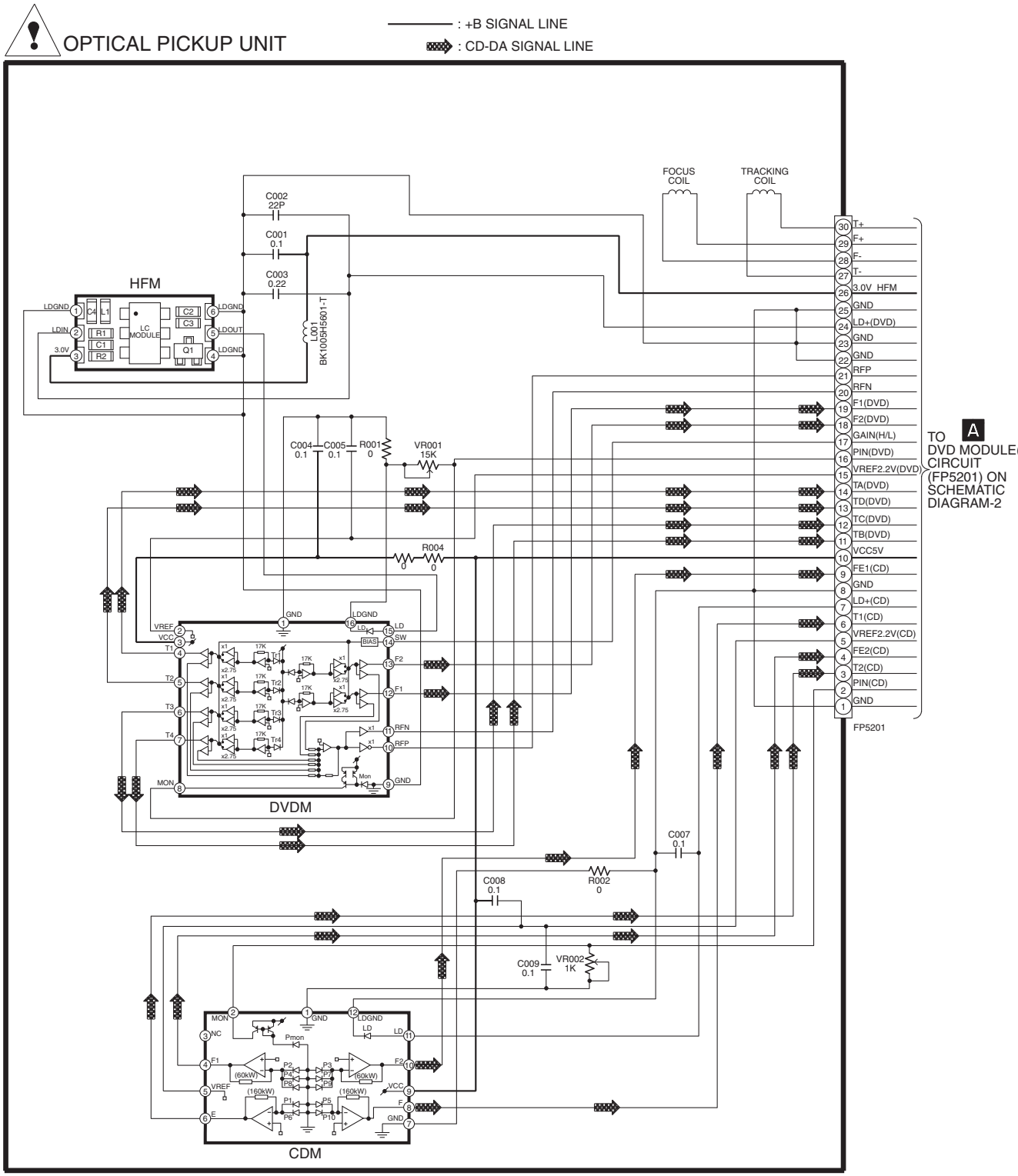
F SENSOR P.C.B (REPX0096A-N)



G TRAY MOTOR P.C.B (REPX0096A-N)



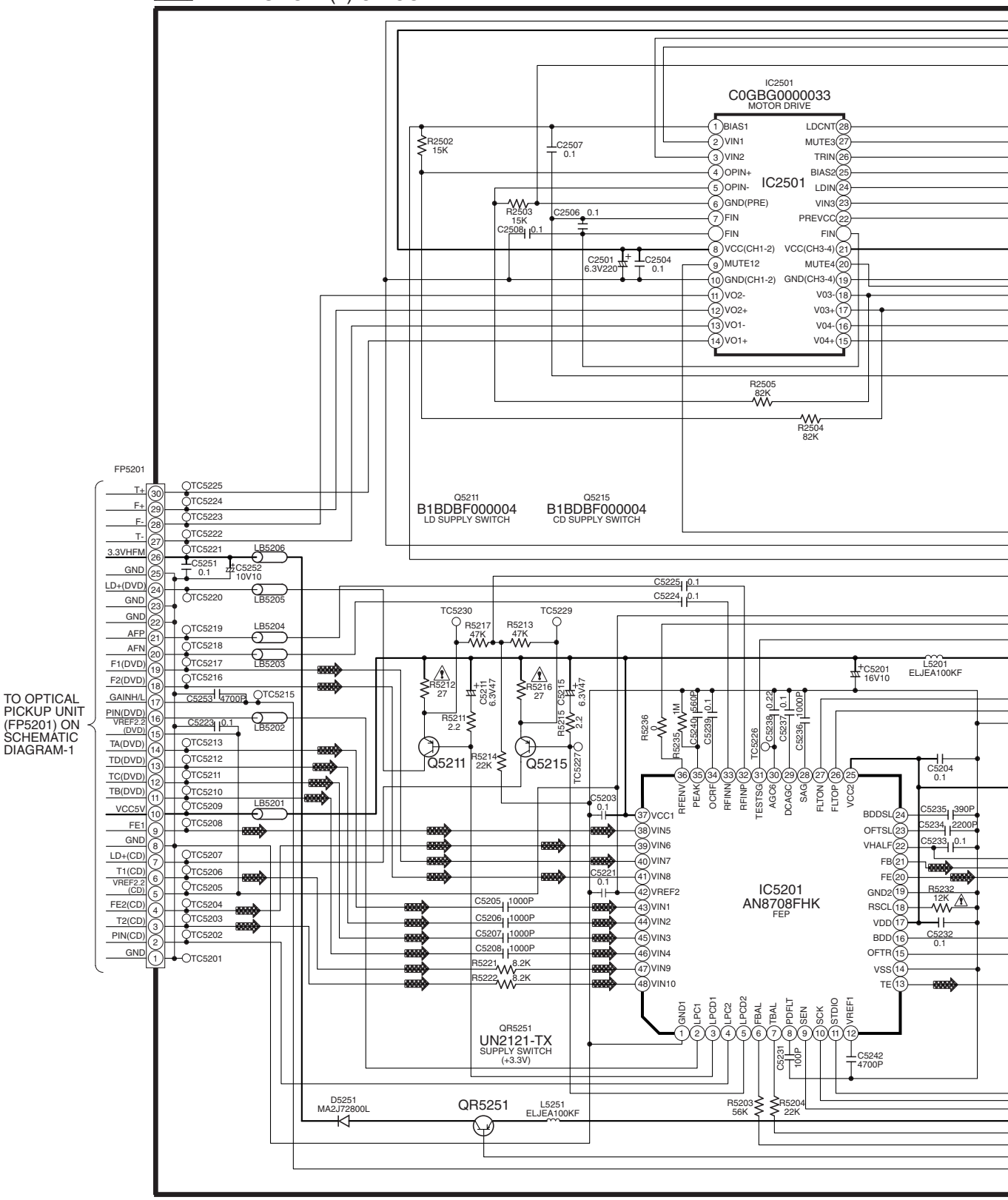
SCHEMATIC DIAGRAM-1



SCHEMATIC DIAGRAM-2

A DVD MODULE(1) CIRCUIT

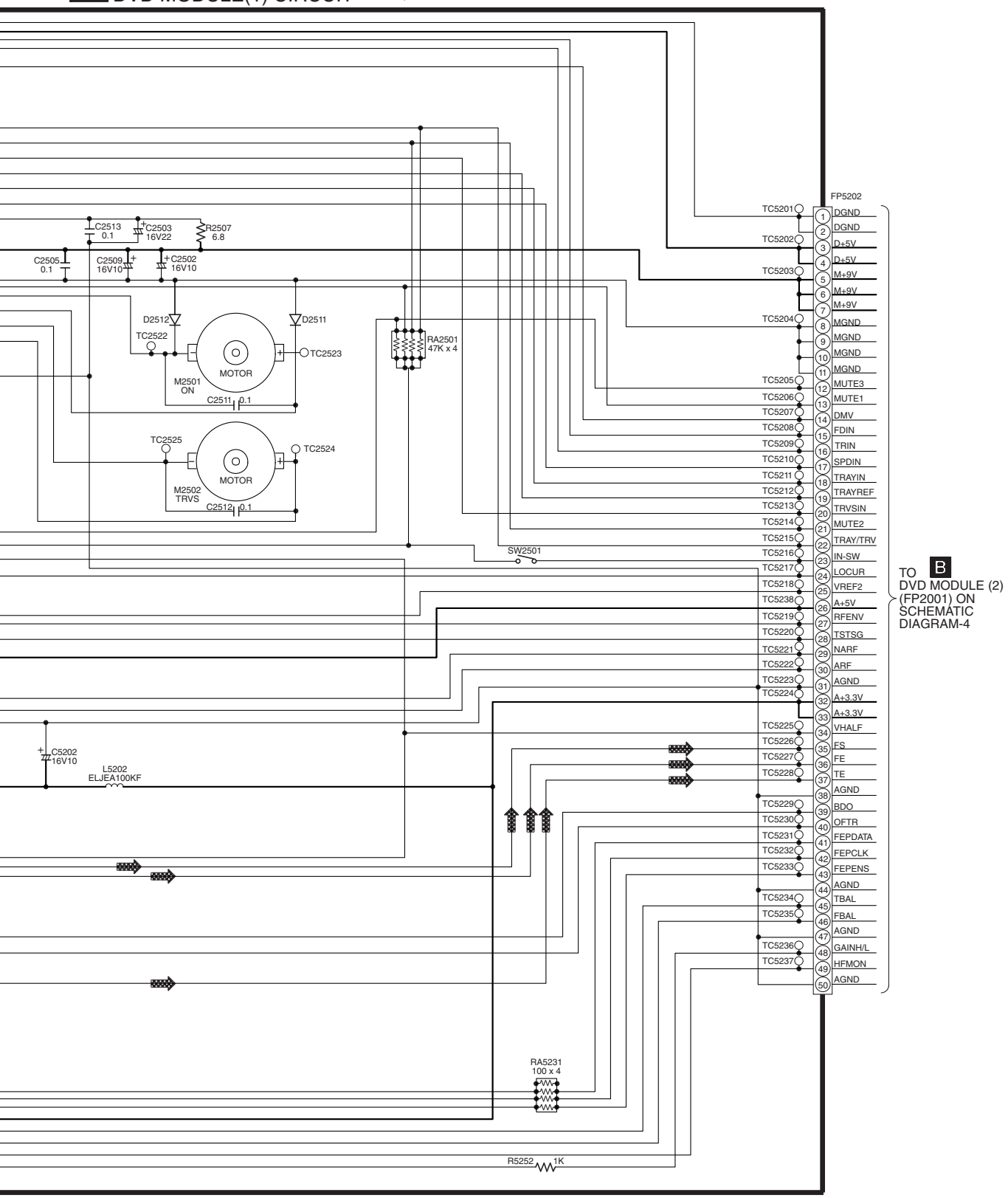
: +B SIGNAL LINE
: CD-DA SIGNAL LINE



SCHEMATIC DIAGRAM-3

A DVD MODULE(1) CIRCUIT

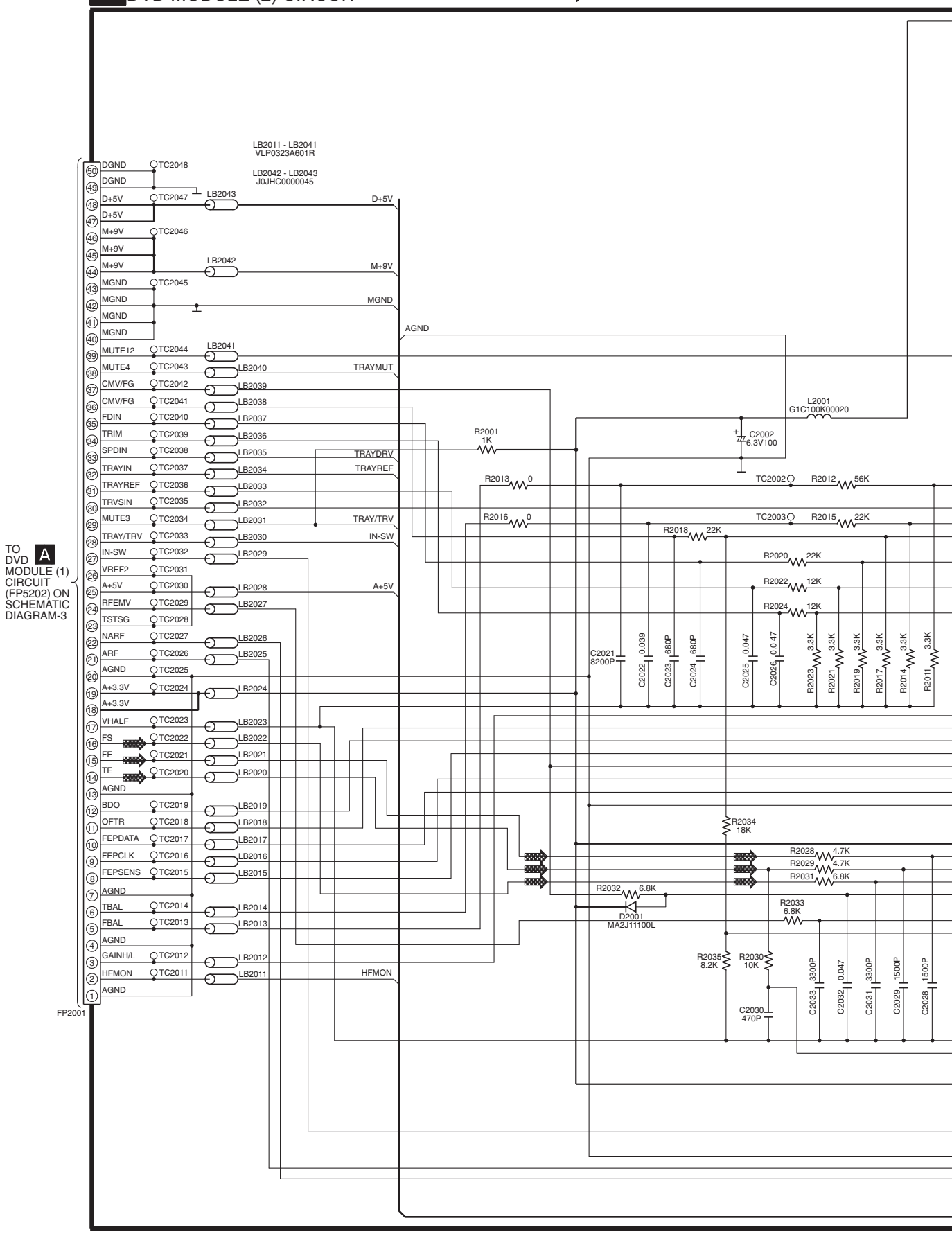
: +B SIGNAL LINE
: CD-DA SIGNAL LINE



SCHEMATIC DIAGRAM-4

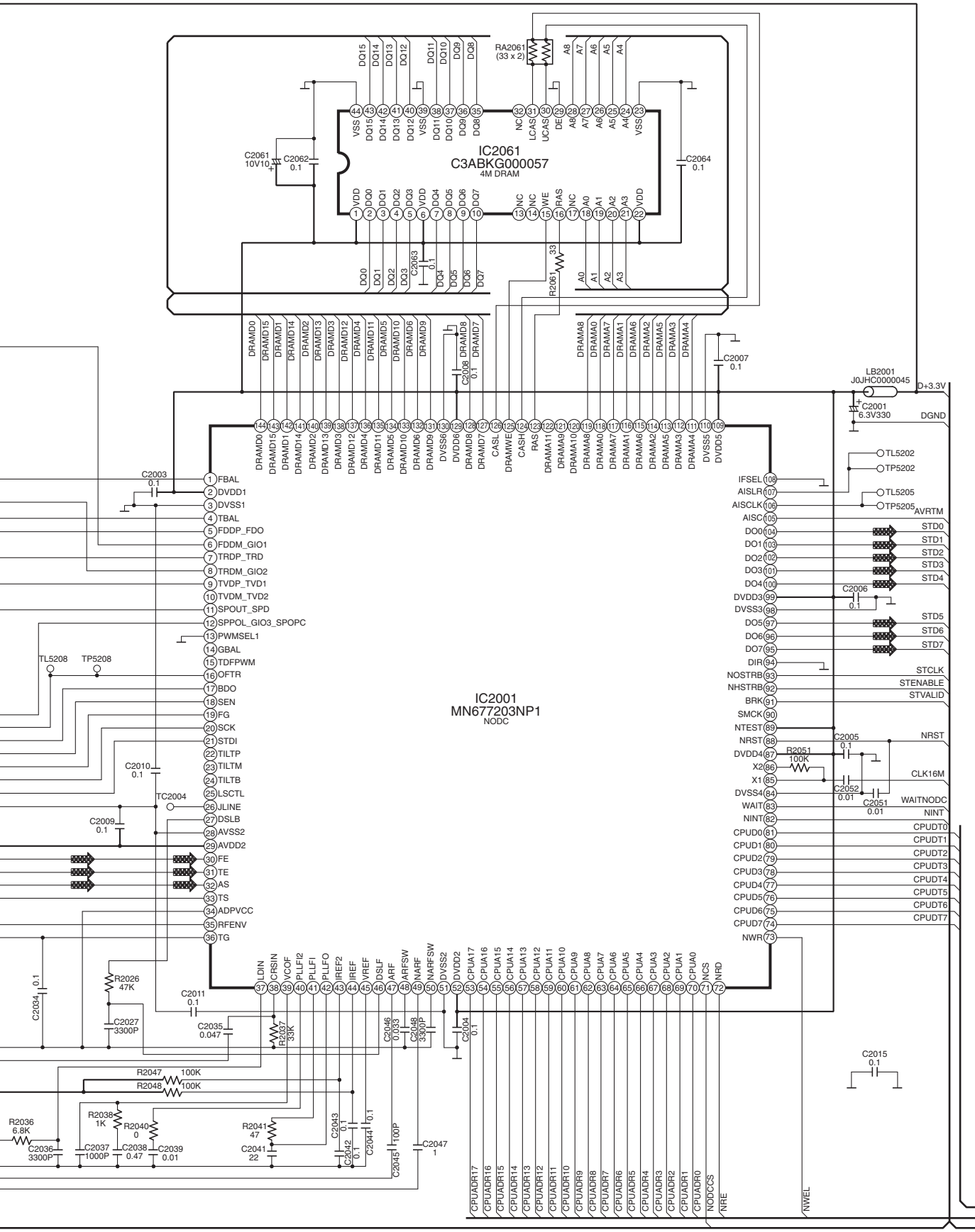
B DVD MODULE (2) CIRCUIT

: +B SIGNAL LINE : CD-DA SIGNAL LINE



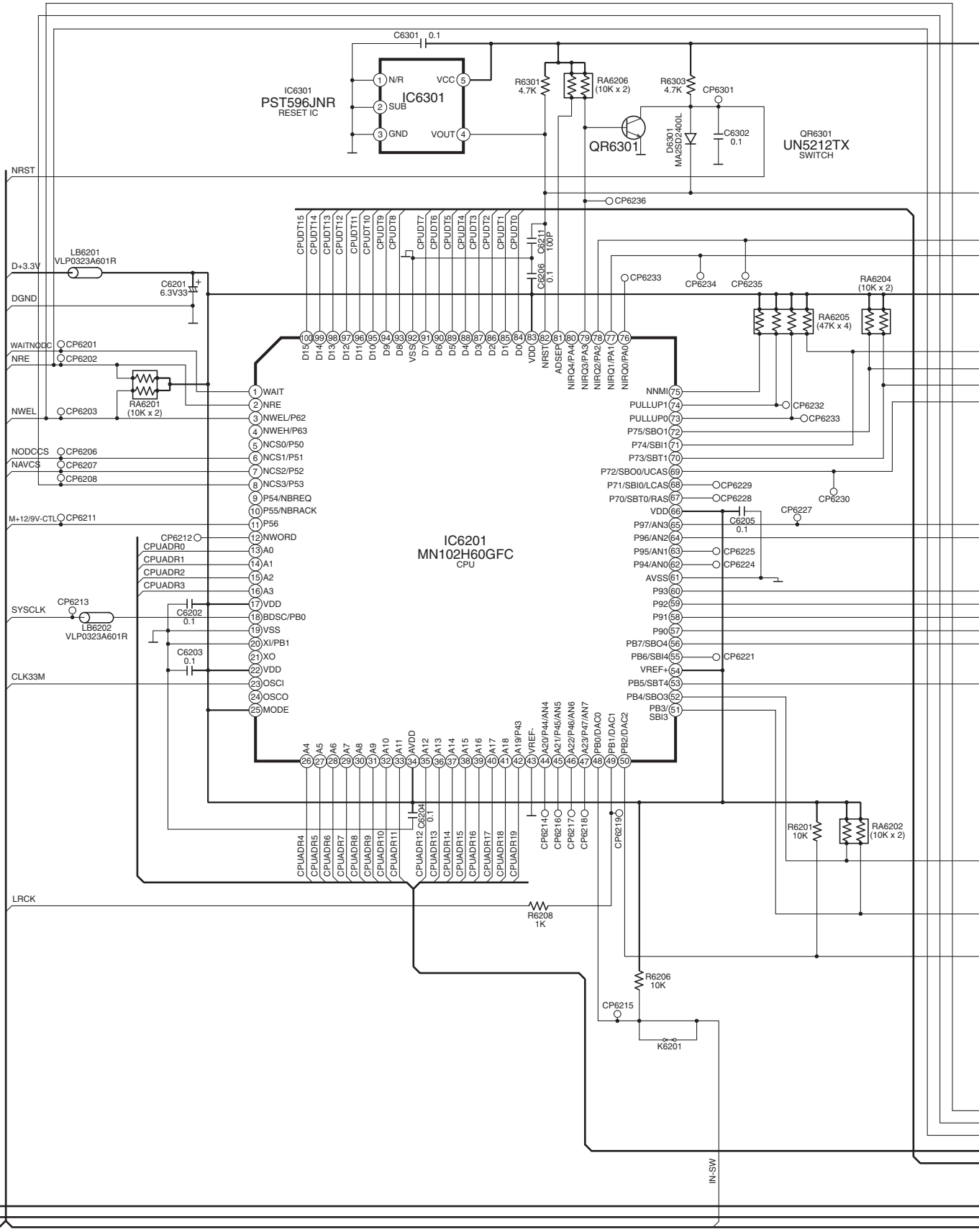
B DVD MODULE (2) CIRCUIT

: +B SIGNAL LINE : CD-DA SIGNAL LINE



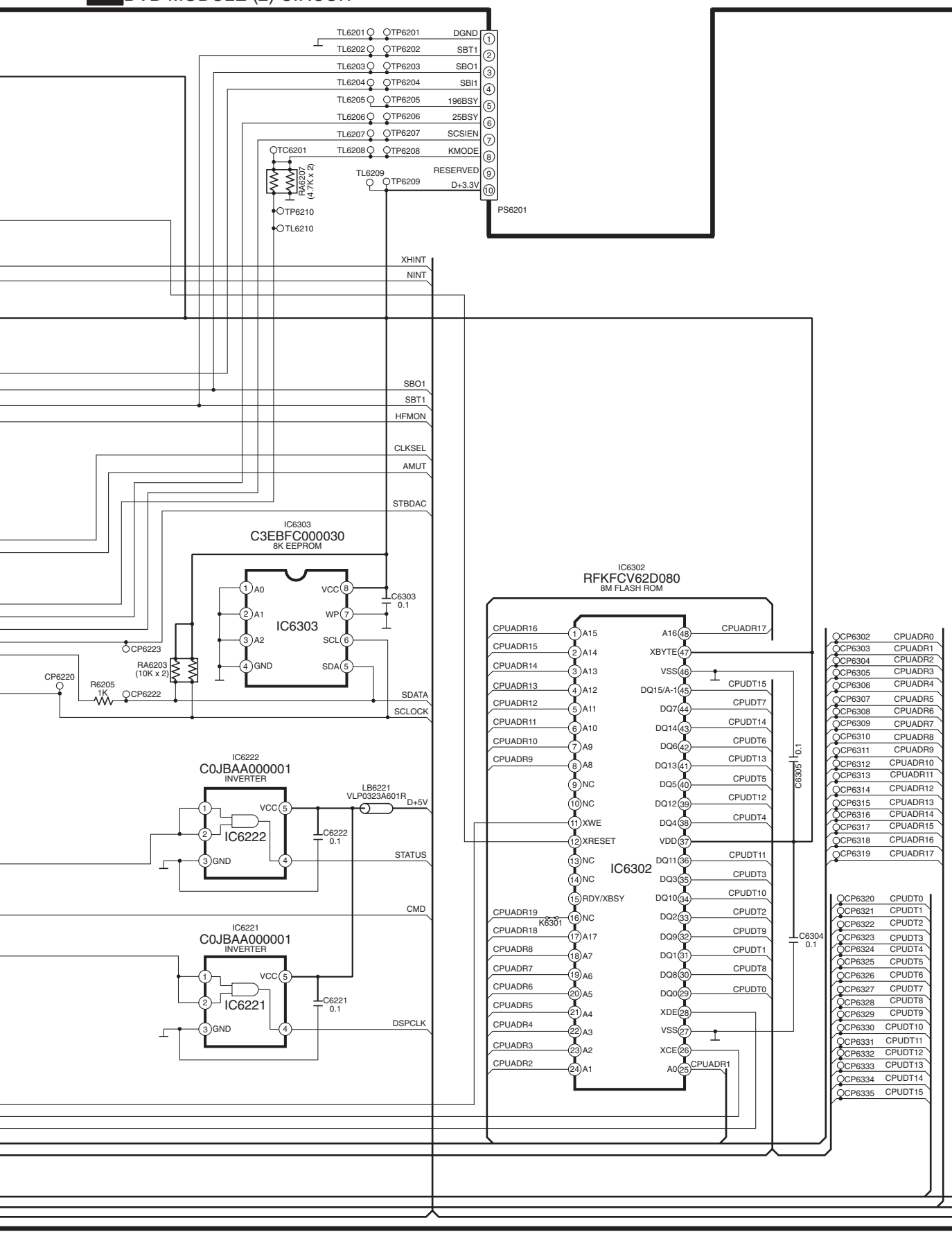
B DVD MODULE (2) CIRCUIT

: +B SIGNAL LINE



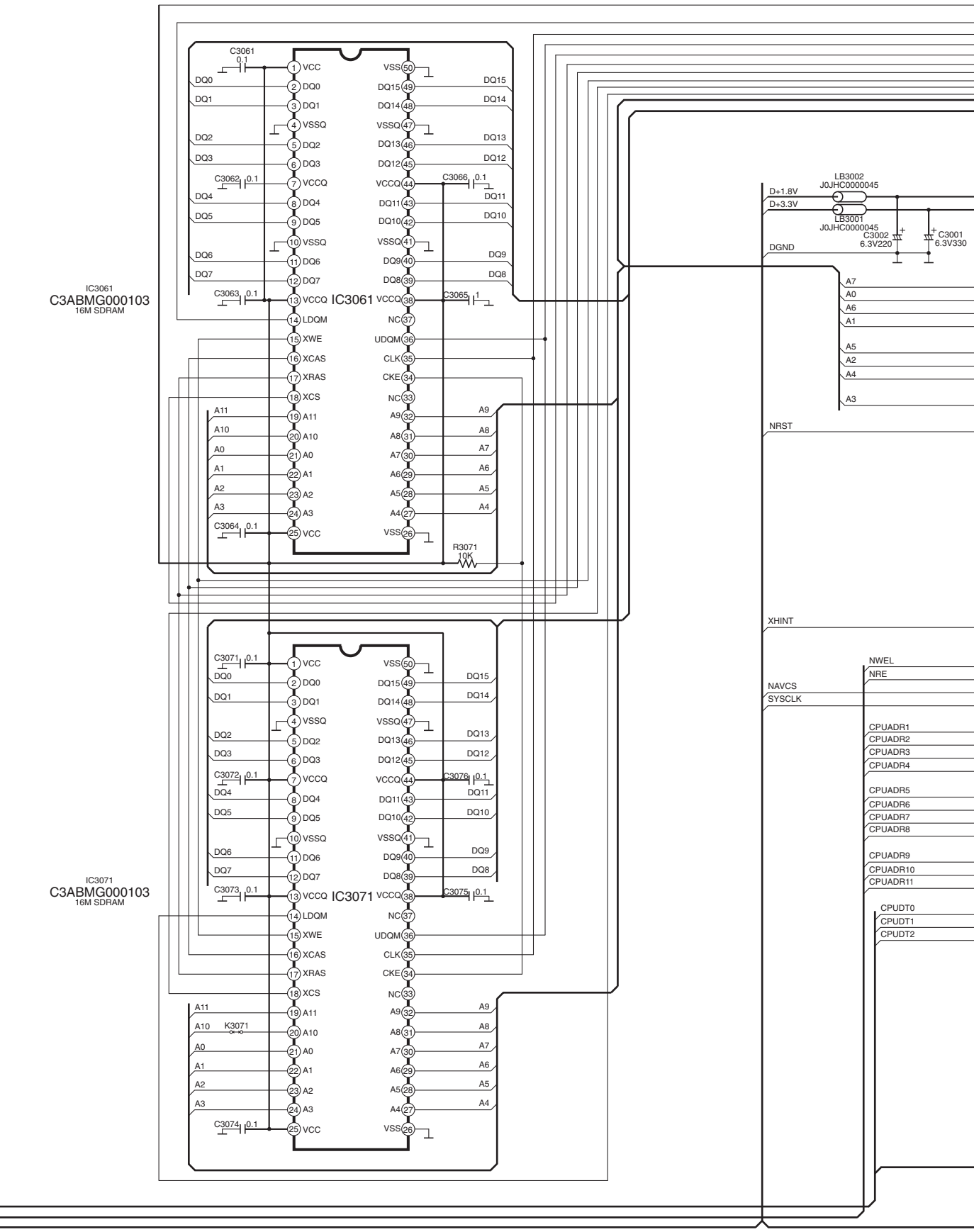
SCHEMATIC DIAGRAM-7

B DVD MODULE (2) CIRCUIT ——— : +B SIGNAL LINE



B DVD MODULE (2) CIRCUIT

——— : +B SIGNAL LINE

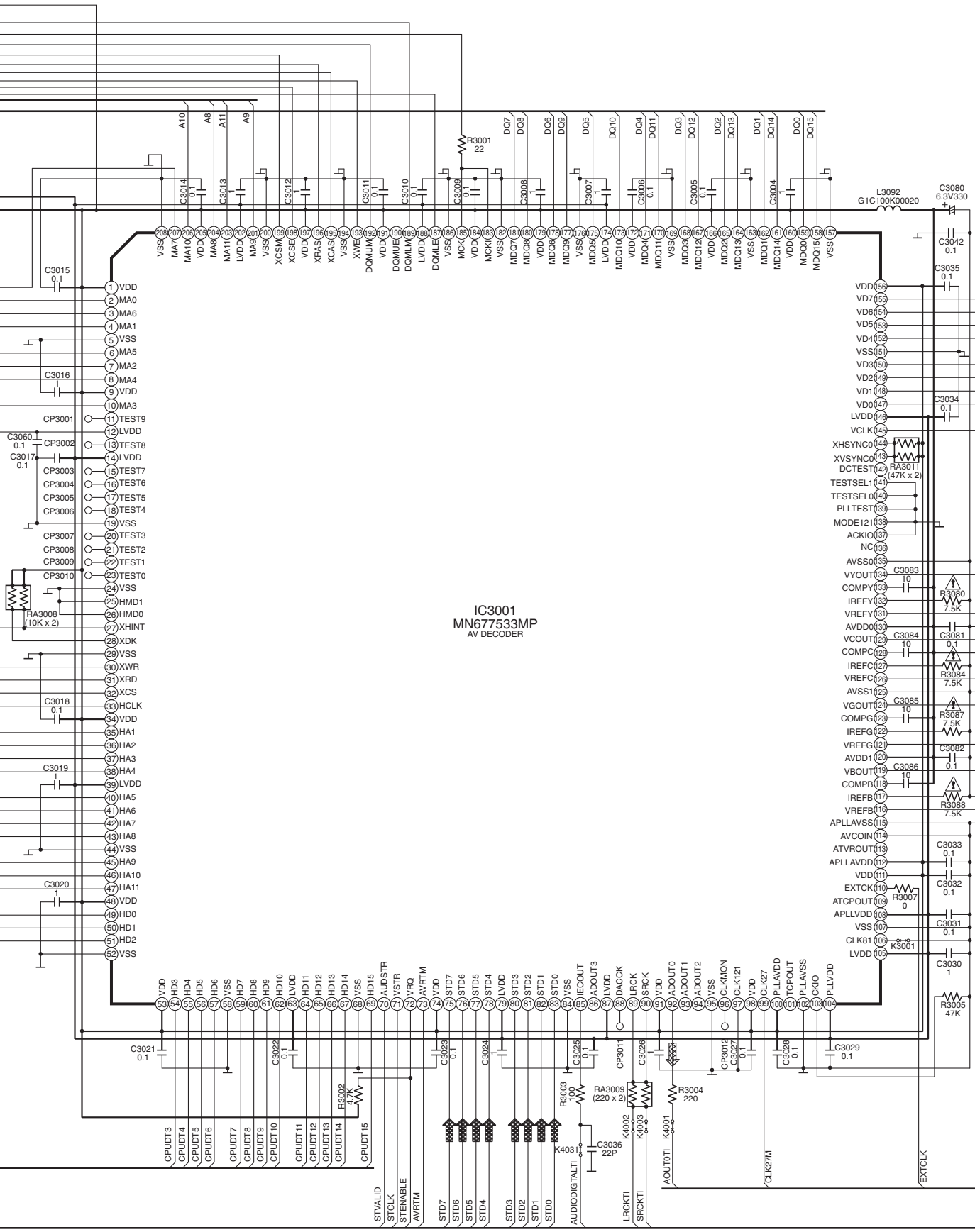


B DVD MODULE (2) CIRCUIT

: +B SIGNAL LINE

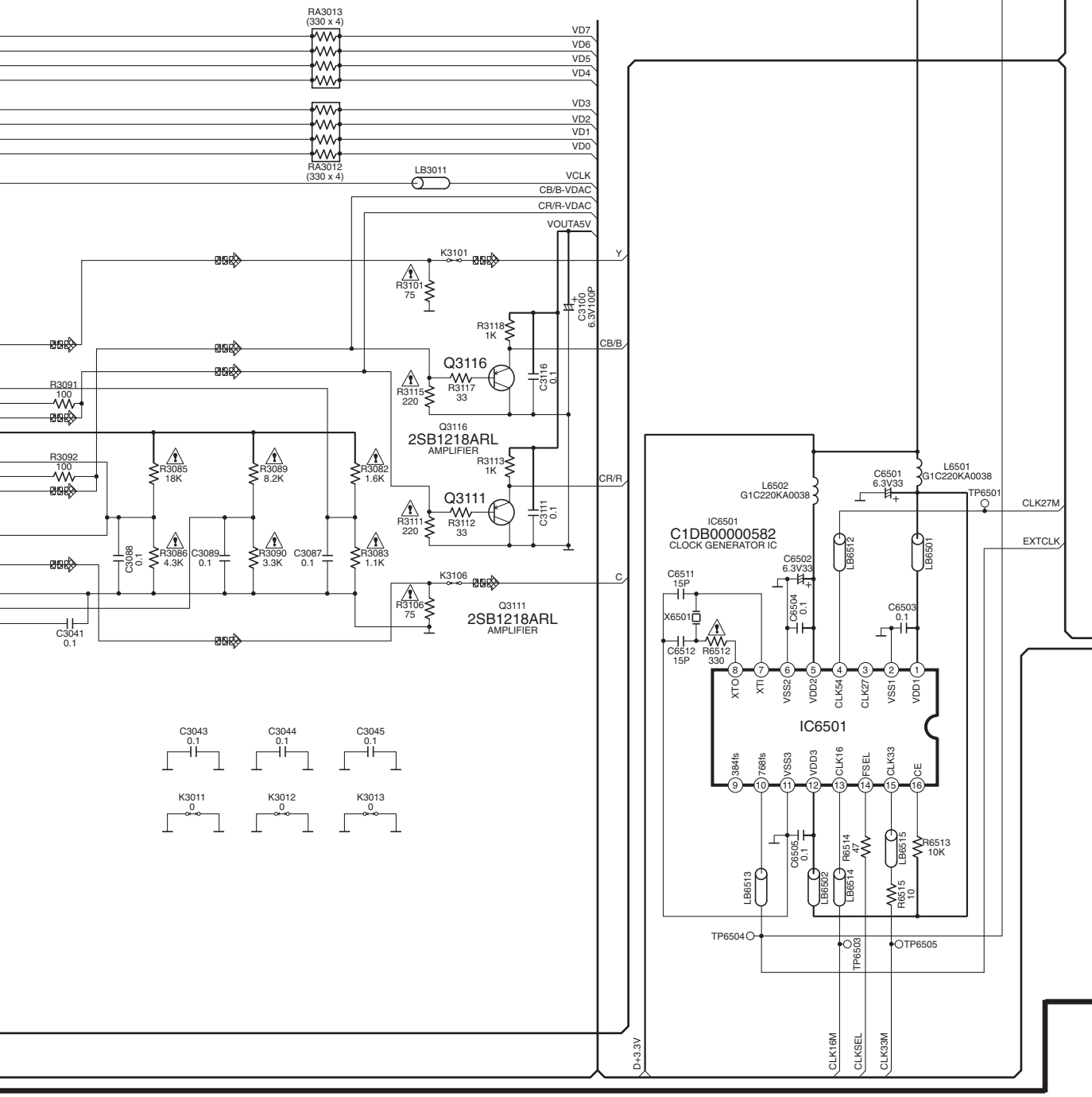
: DVD(AUDIO) SIGNAL LINE

: CD-DA SIGNAL LINE



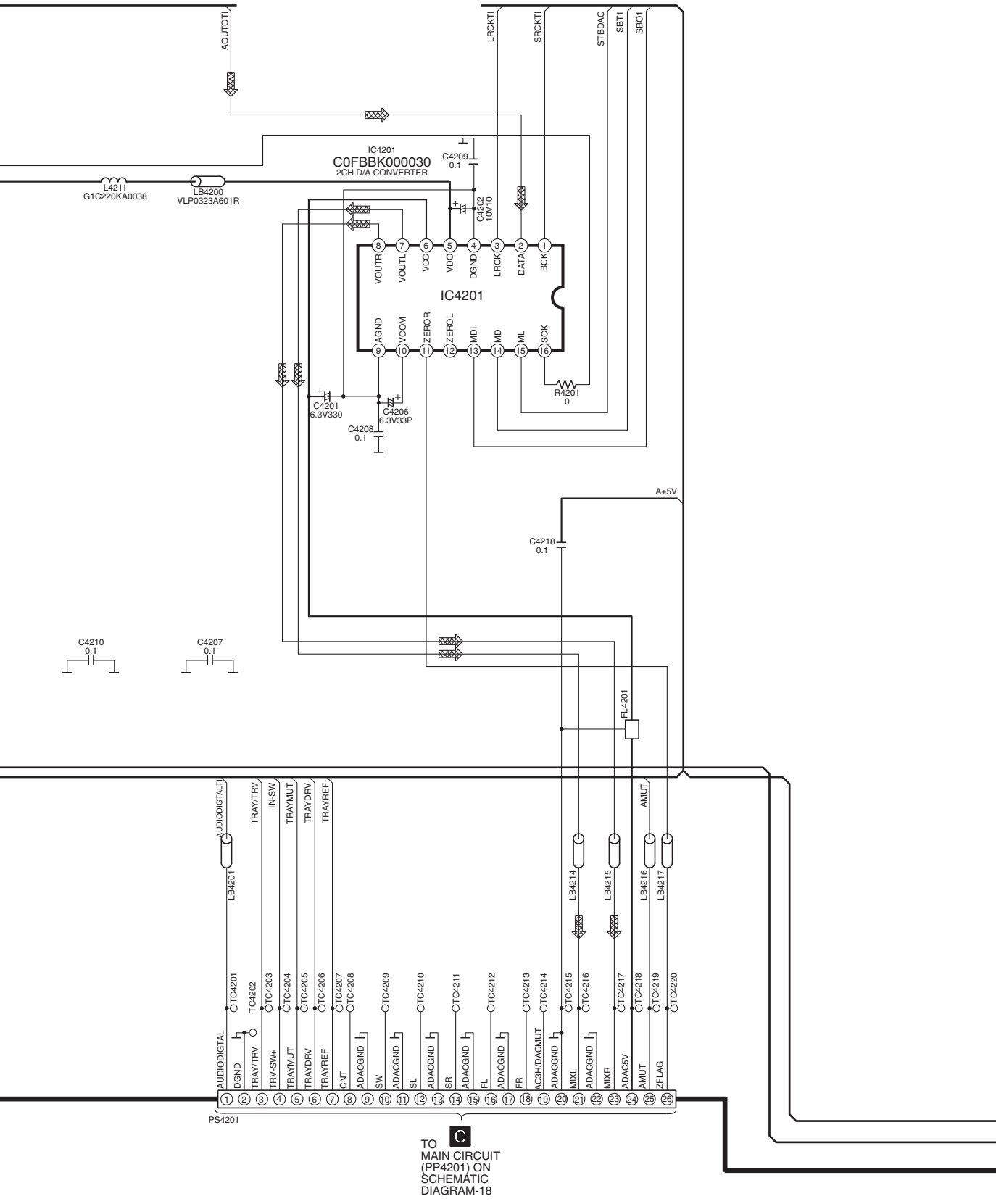
B DVD MODULE (2) CIRCUIT

——— : +B SIGNAL LINE ▨▨▨ : DVD(VIDEO) SIGNAL LINE



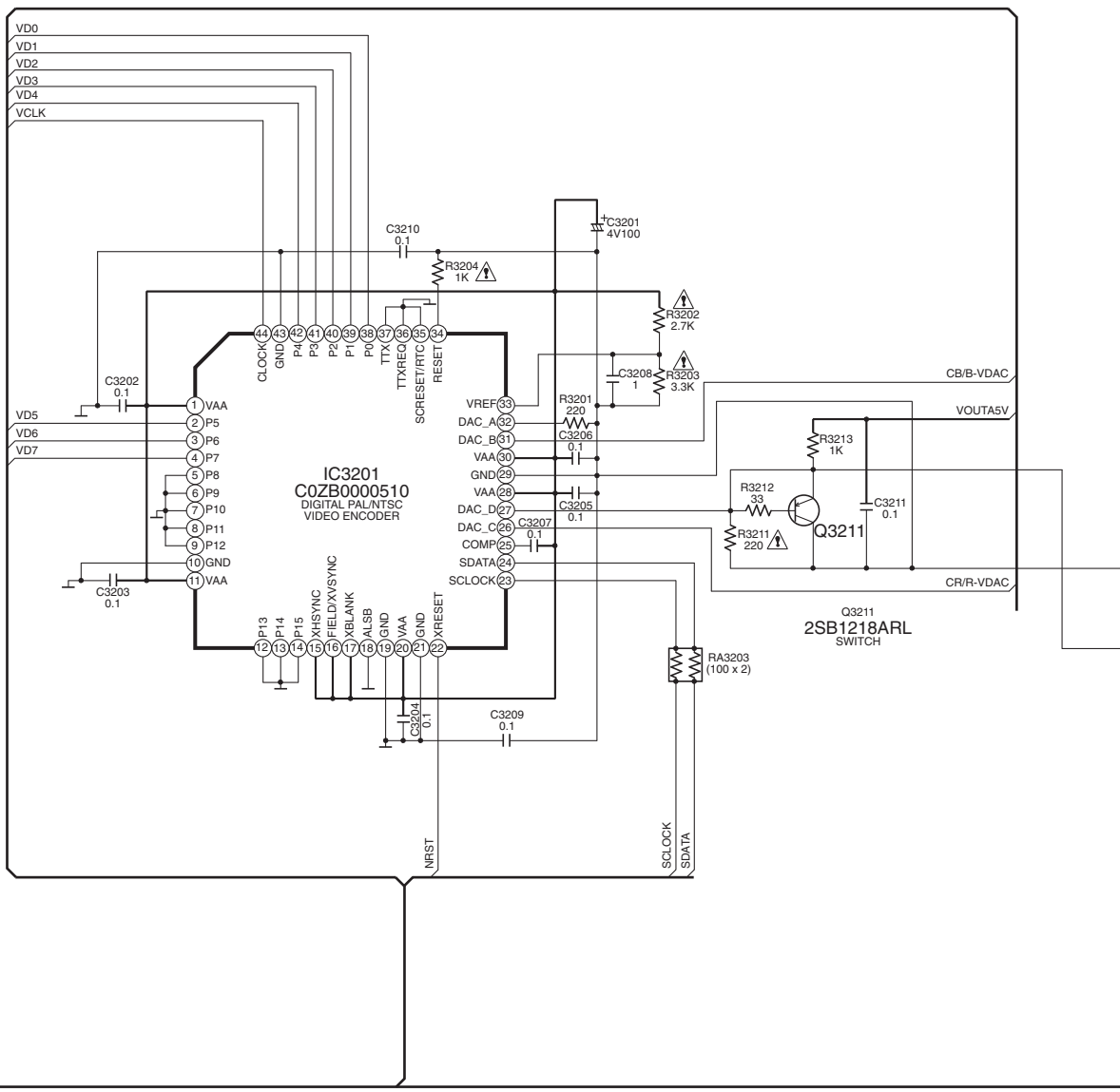
B DVD MODULE (2) CIRCUIT

: +B SIGNAL LINE : DVD(AUDIO) SIGNAL LINE



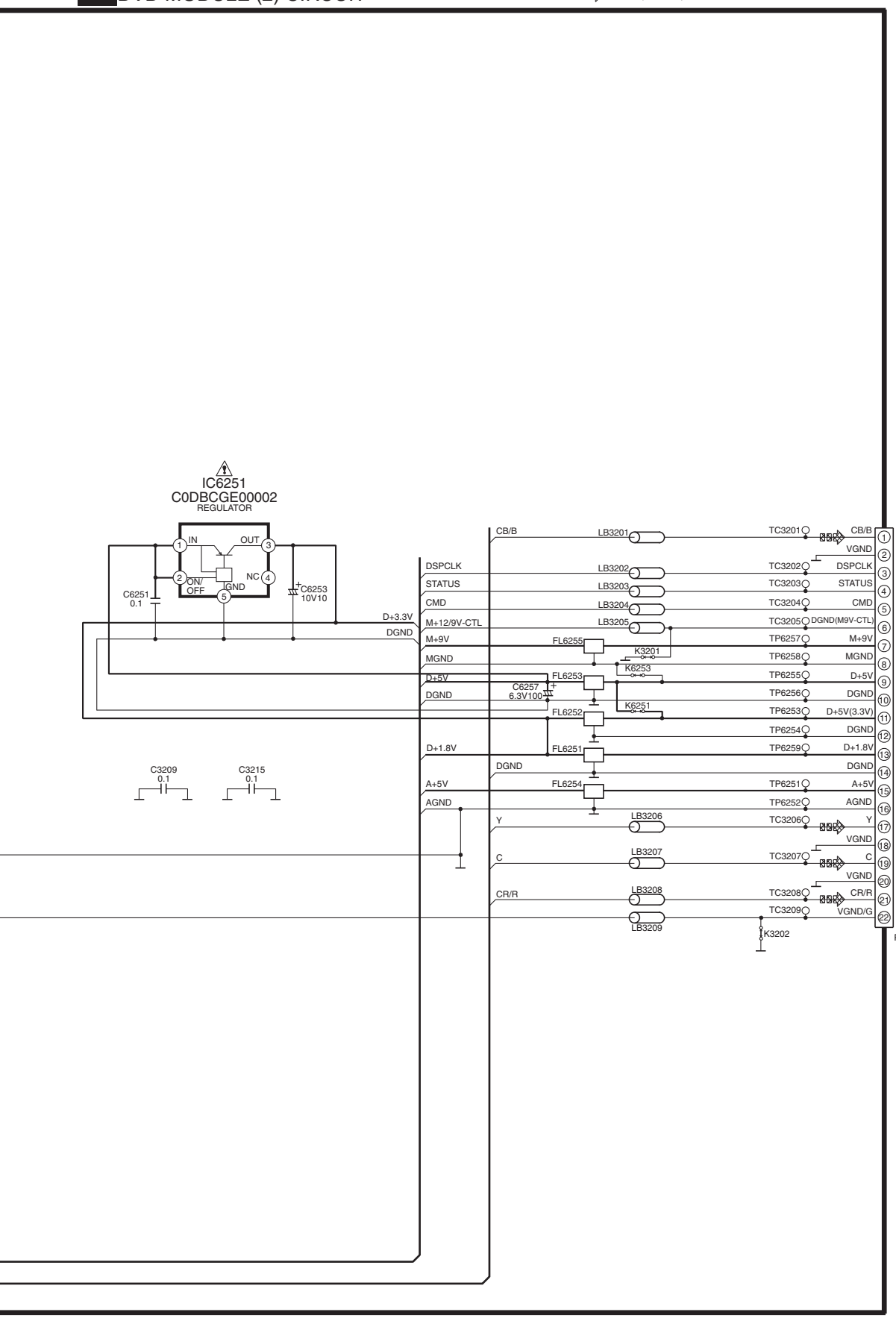
B DVD MODULE (2) CIRCUIT

——— : +B SIGNAL LINE



B DVD MODULE (2) CIRCUIT

: +B SIGNAL LINE : DVD(VIDEO) SIGNAL LINE

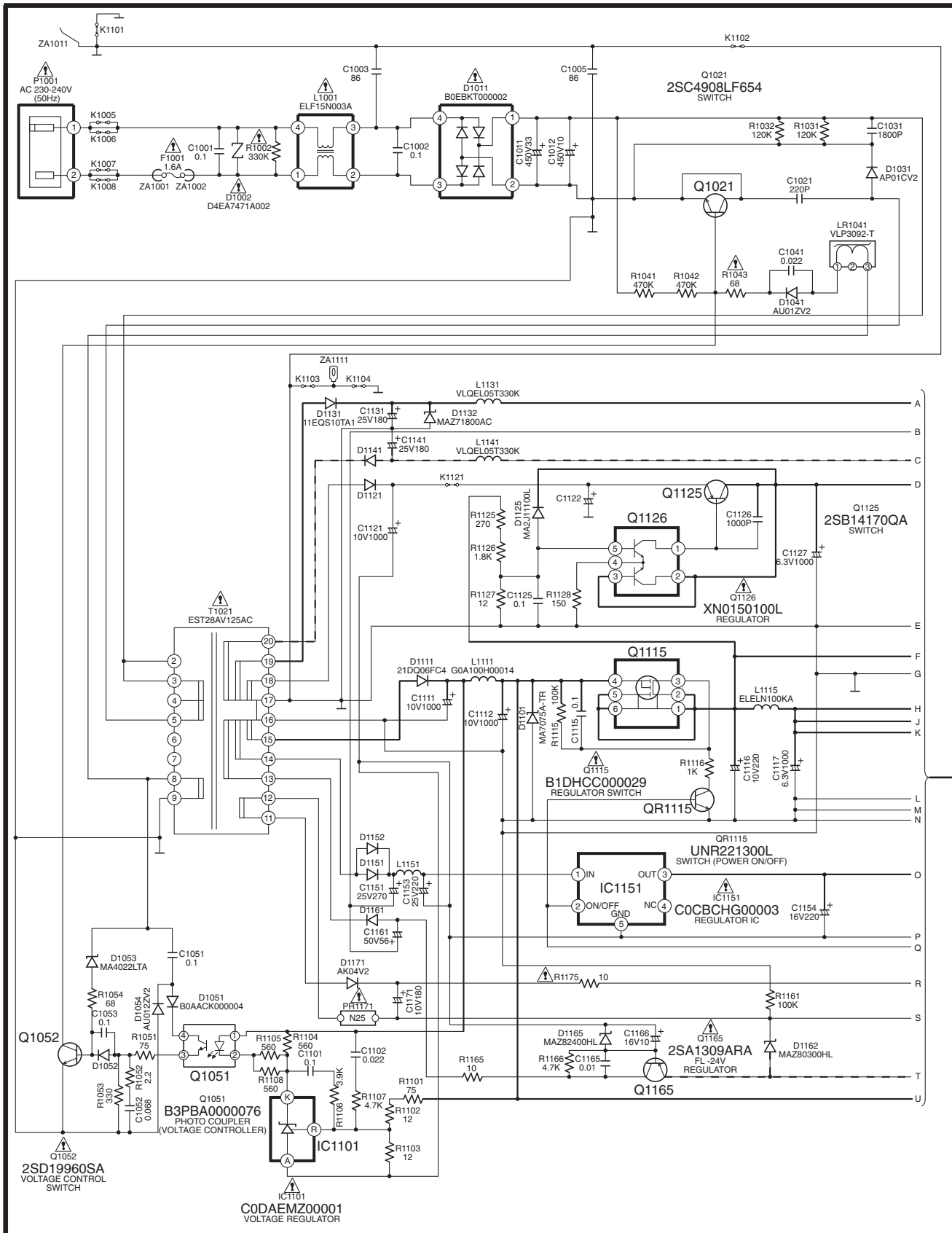


SCHEMATIC DIAGRAM-14

C MAIN CIRCUIT

– – – : -B SIGNAL LINE

——— : +B SIGNAL LINE

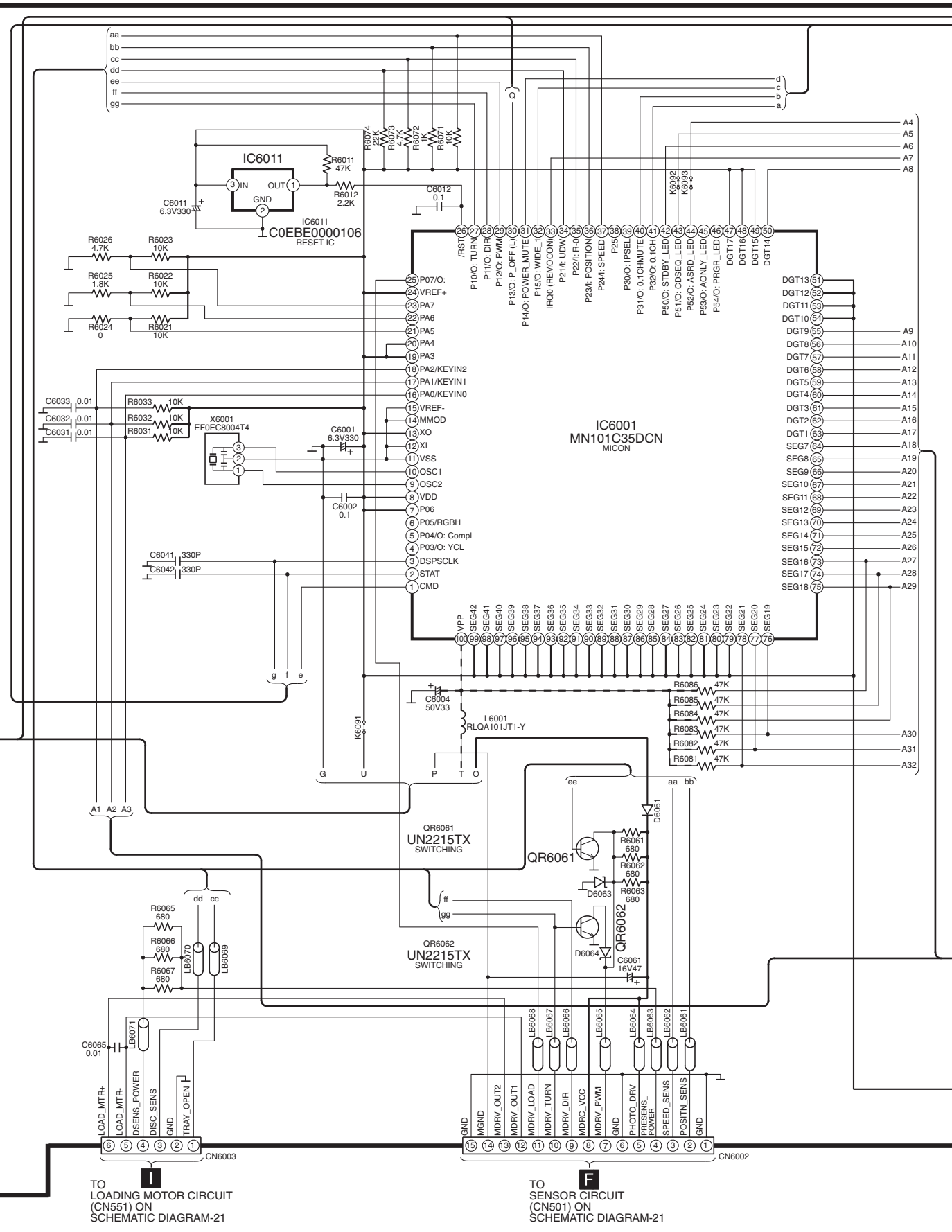


SCHEMATIC DIAGRAM-15

C MAIN CIRCUIT

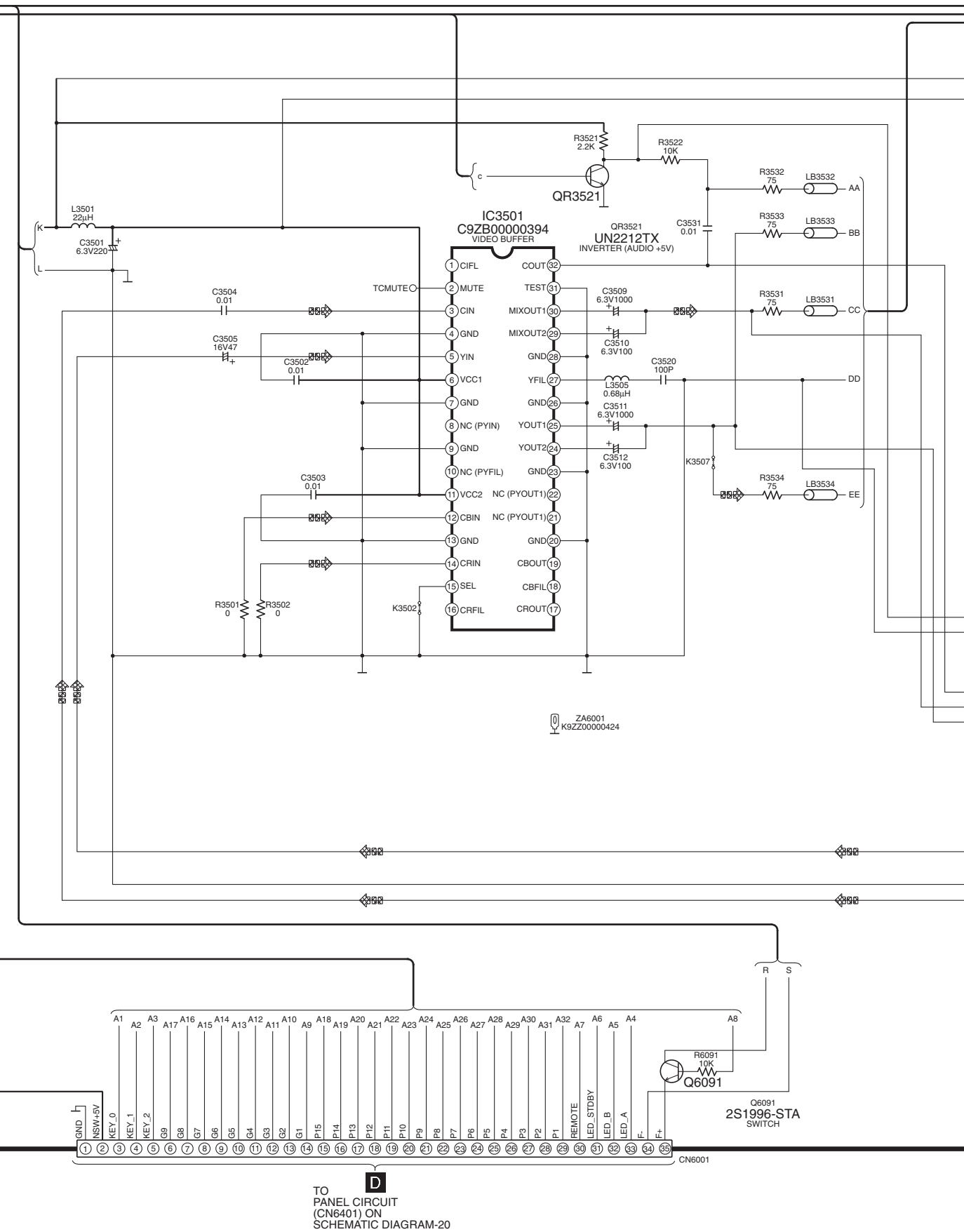
– – – : -B SIGNAL LINE

——— : +B SIGNAL LINE



C MAIN CIRCUIT

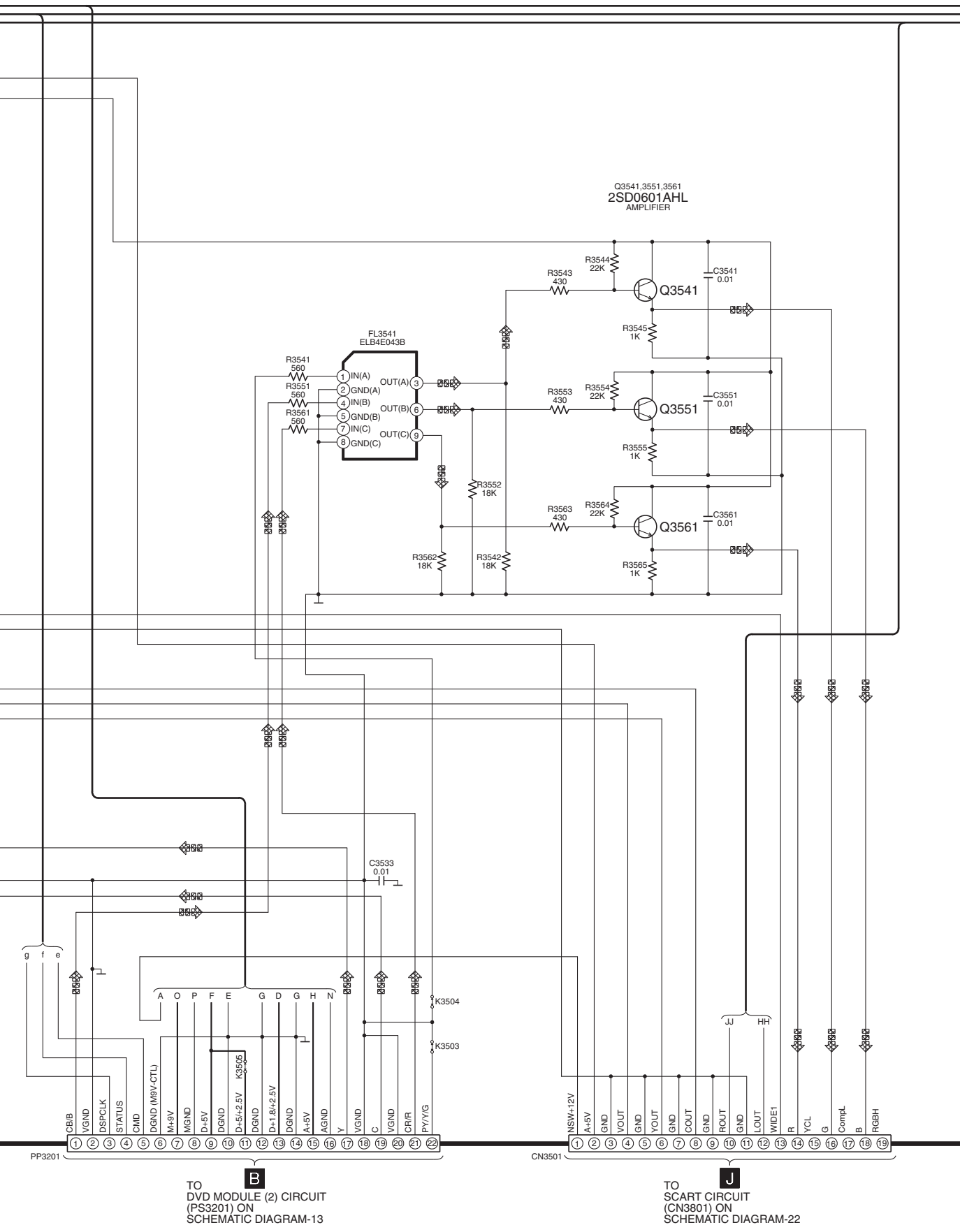
——— : +B SIGNAL LINE ▨▨▨ : DVD VIDEO SIGNAL LINE



SCHEMATIC DIAGRAM-17

C MAIN CIRCUIT

——— : +B SIGNAL LINE ⊠⊠⊠ : DVD VIDEO SIGNAL LINE

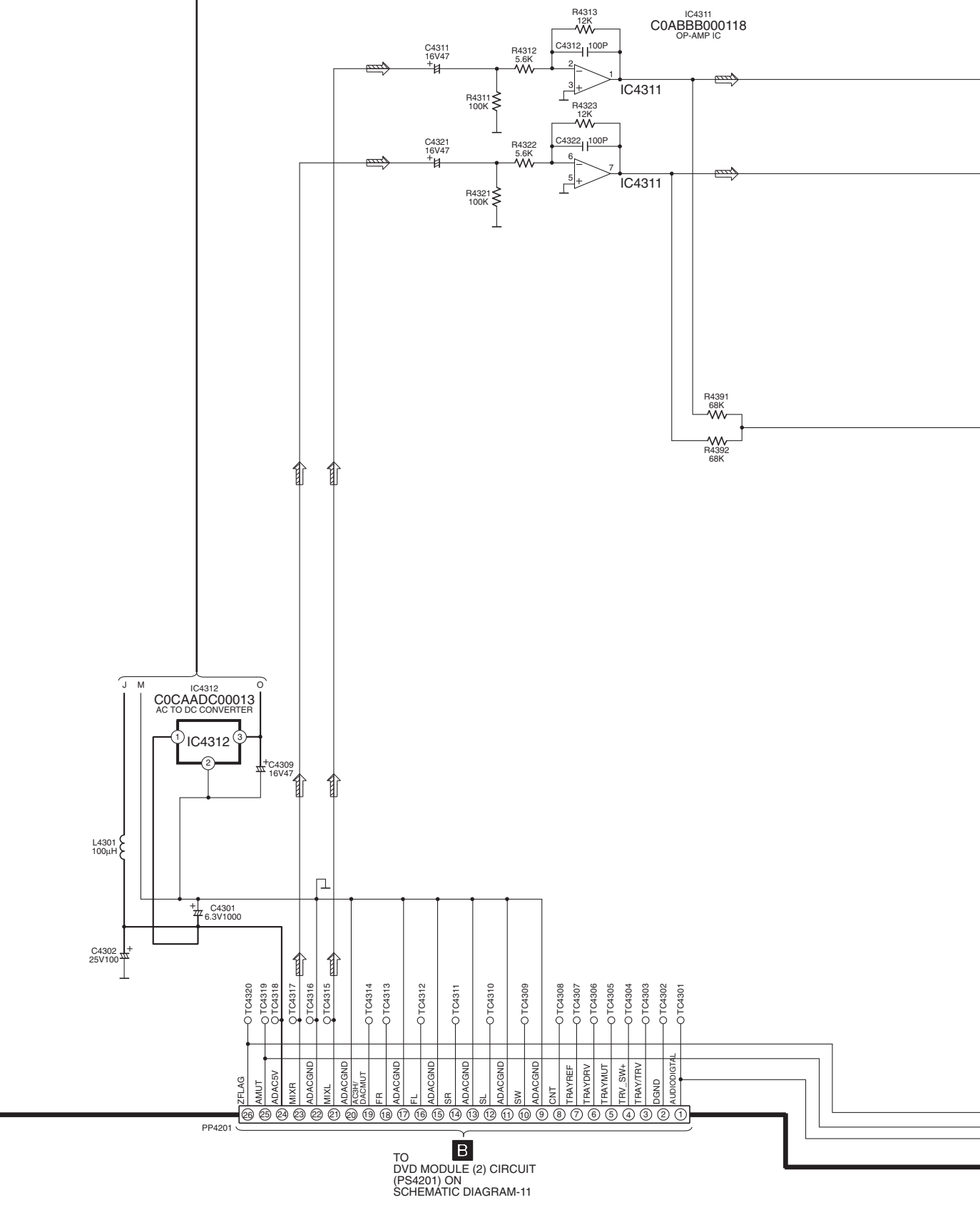


TO B
DVD MODULE (2) CIRCUIT
(PS3201) ON
SCHEMATIC DIAGRAM-13

TO J
SCART CIRCUIT
(CN3801) ON
SCHEMATIC DIAGRAM-22

C MAIN CIRCUIT

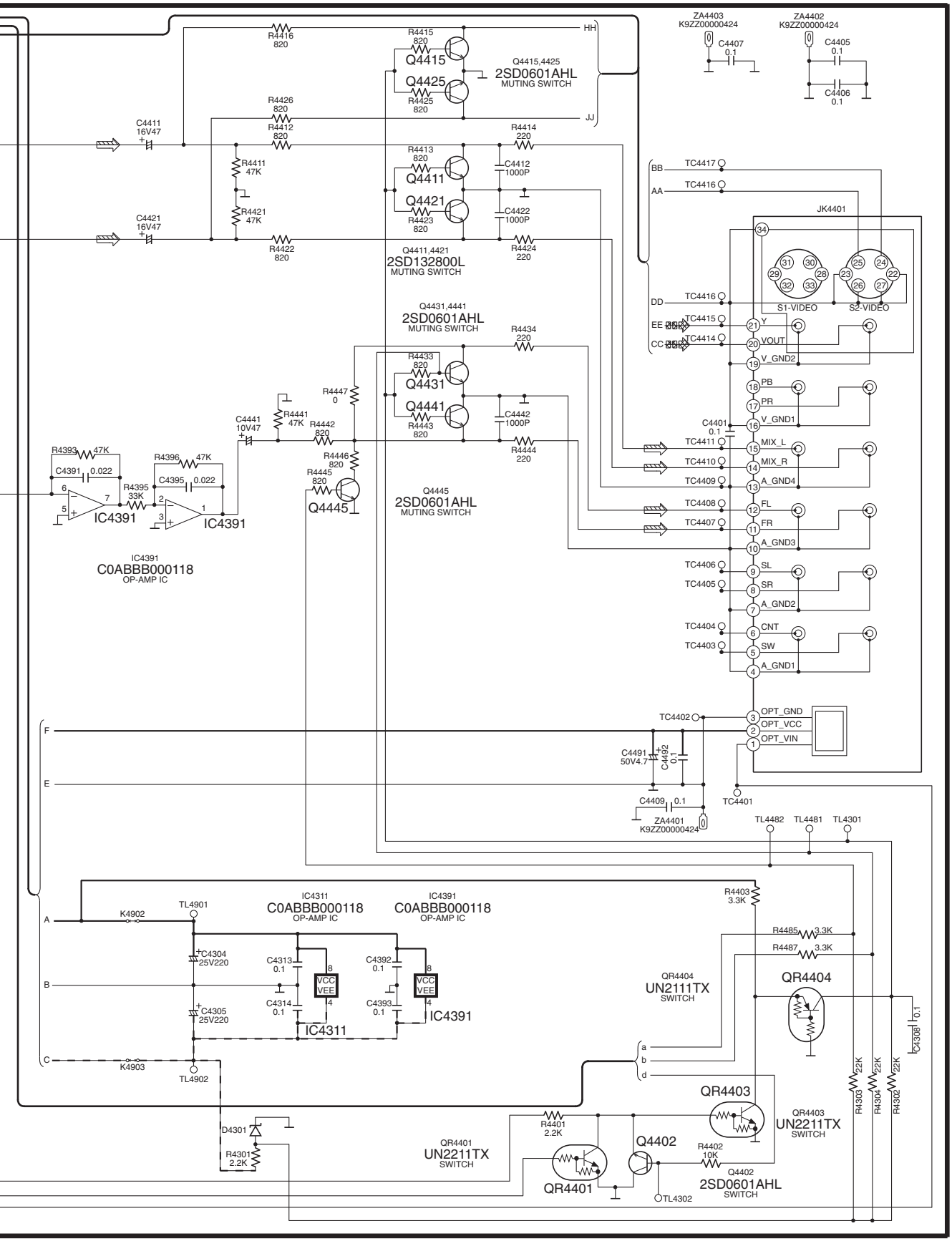
——— : +B SIGNAL LINE ⇨ : MAIN SIGNAL LINE

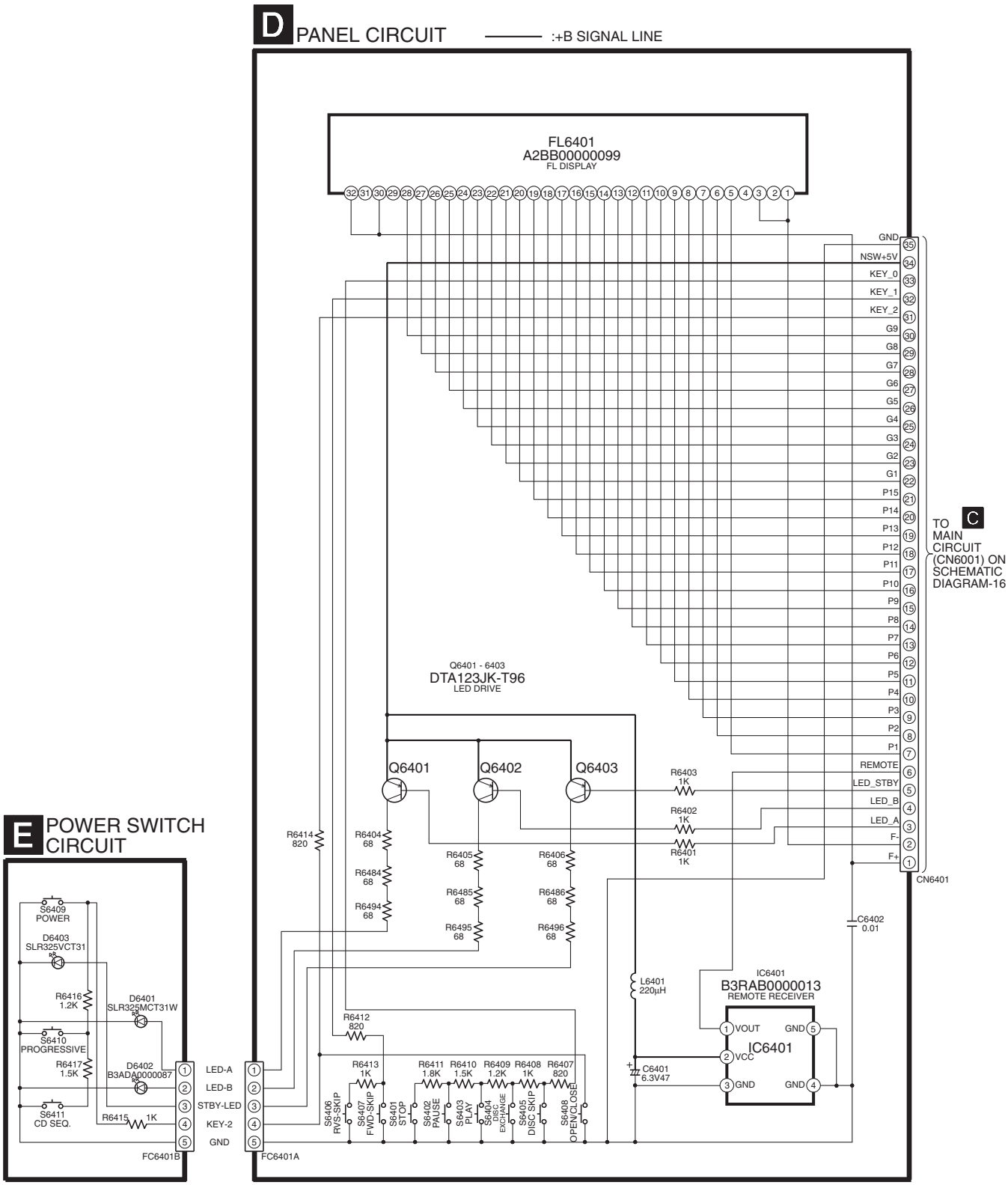


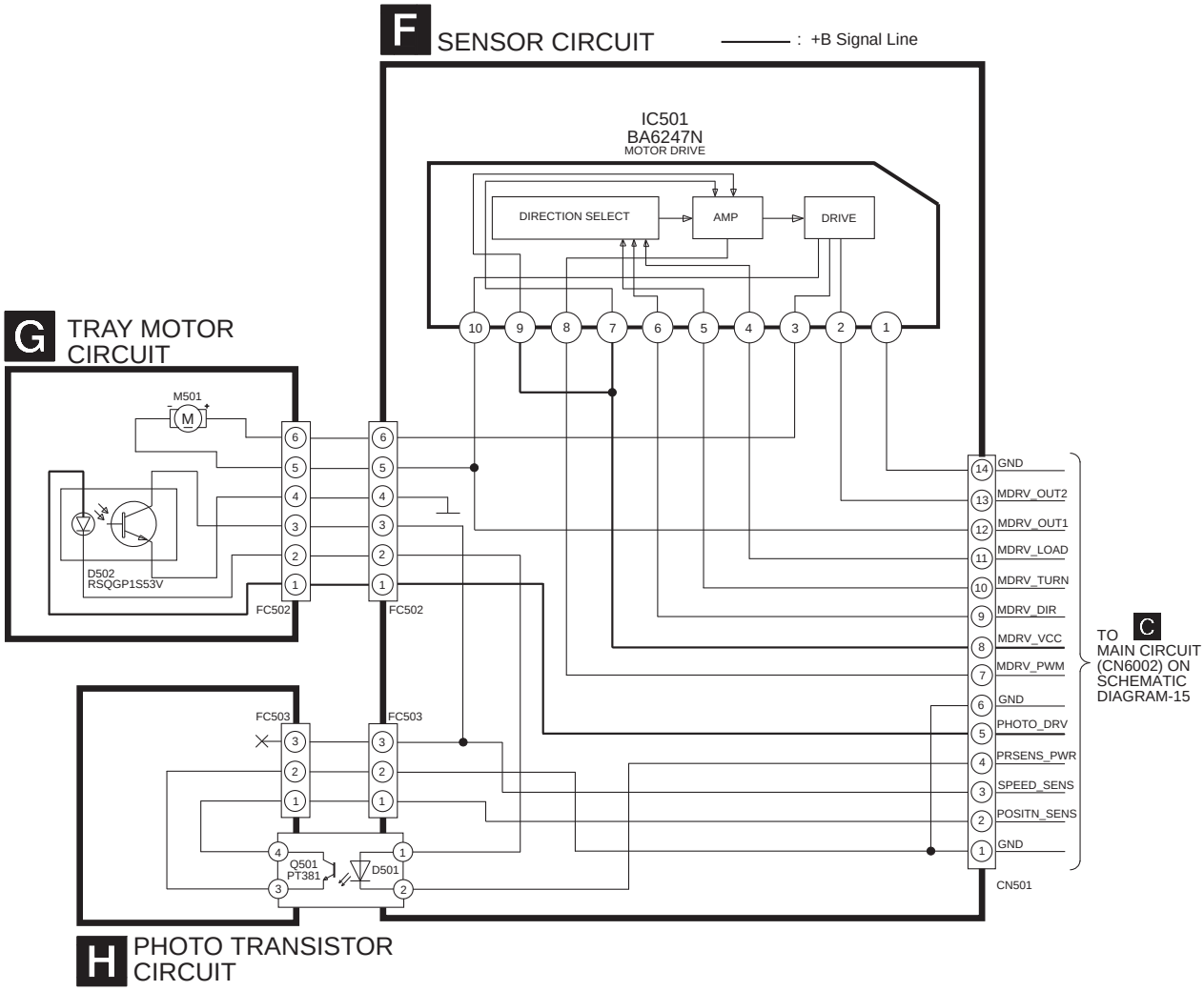
SCHEMATIC DIAGRAM-19

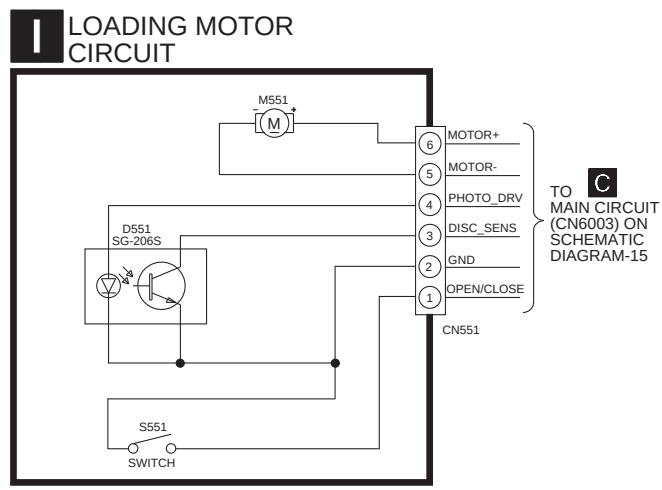
C MAIN CIRCUIT

– – – : -B SIGNAL LINE
——— : +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: MAIN SIGNAL LINE




D PANEL CIRCUIT
:+B SIGNAL LINE
FL6401
A2BB00000099
FL DISPLAY
GND
NSW+5V
KEY_0
KEY_1
KEY_2
G9
G8
G7
G6
G5
G4
G3
G2
G1
P15
P14
P13
P12
P11
P10
P9
P8
P7
P6
P5
P4
P3
P2
P1
REMOTE
LED_STBY
LED_B
LED_A
F-
F+
CN6401
TO C MAIN CIRCUIT (CN6001) ON SCHEMATIC DIAGRAM-16
Q6401 - 6403
DTA123JK-T96
LED DRIVE
Q6401
Q6402
Q6403
R6403 1K
R6402 1K
R6401 1K
R6414 820
R6404 68
R6484 68
R6494 68
R6405 68
R6485 68
R6495 68
R6406 68
R6486 68
R6496 68
C6402 0.01
L6401 220µH
IC6401
B3RAB0000013
REMOTE RECEIVER
VOUT
GND
VCC
GND
GND
C6401 6.3V47
R6412 820
R6413 1K
R6411 1.8K
R6410 1.5K
R6409 1.2K
R6408 1K
R6407 820
S6406 RVS-SKIP
S6407 FWD-SKIP
S6401 STOP
S6402 PAUSE
S6403 PLAY
S6404 DISC EXCHANGE
S6405 DISC SKIP
S6408 OPEN/CLOSE
FC6401A
E POWER SWITCH CIRCUIT
S6409 POWER
D6403 SLR325VCT31
R6416 1.2K
D6401 SLR325MCT31W
S6410 PROGRESSIVE
R6417 1.5K
D6402 B3ADA0000087
S6411 CD SEQ.
R6415 1K
LED-A
LED-B
STBY-LED
KEY-2
GND
FC6401B

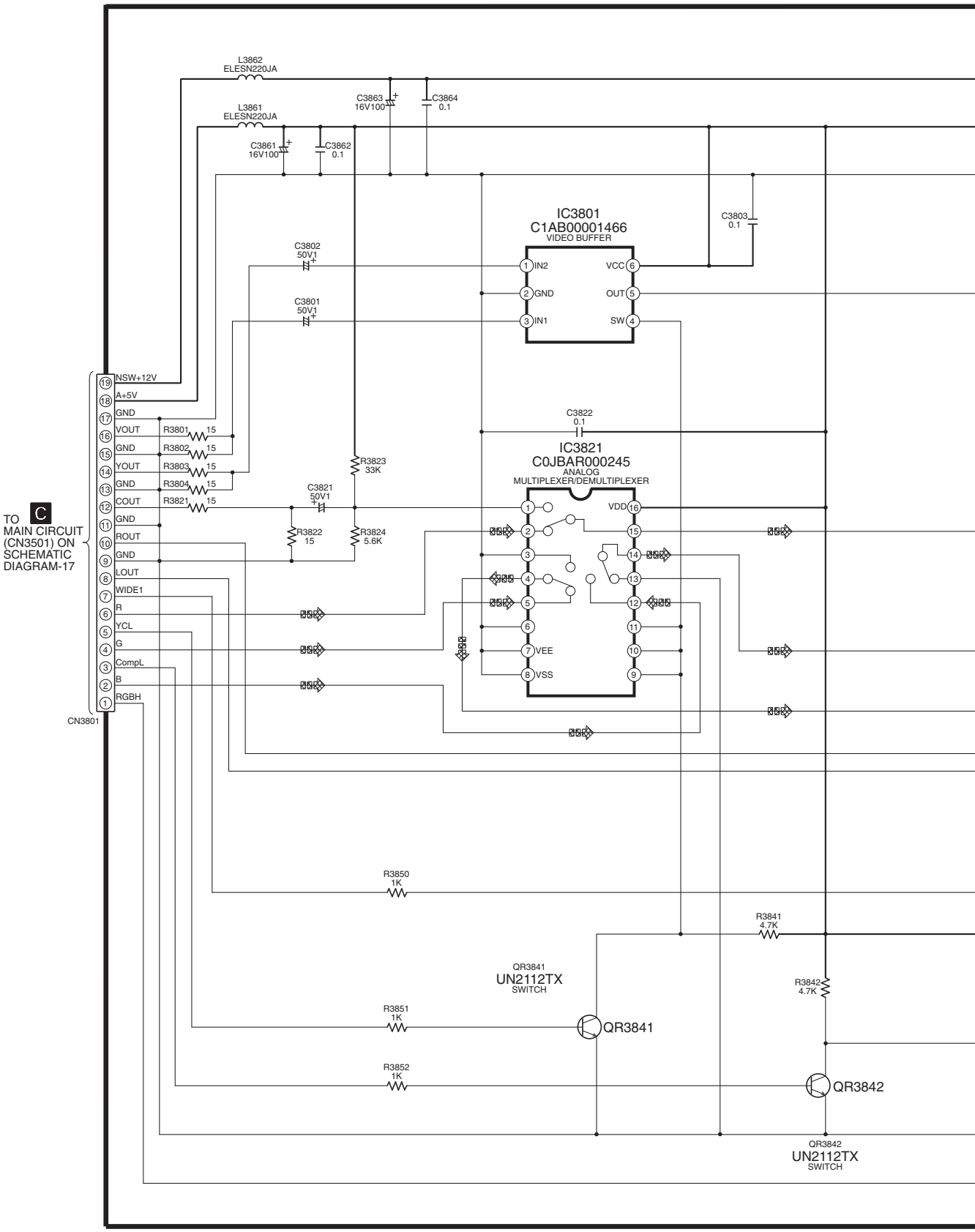

F SENSOR CIRCUIT
: +B Signal Line
IC501
BA6247N
MOTOR DRIVE
DIRECTION SELECT
AMP
DRIVE
10 9 8 7 6 5 4 3 2 1
G TRAY MOTOR CIRCUIT
M501
D502
RSQGP1S53V
FC502
FC502
FC503
FC503
Q501
PT381
D501
H PHOTO TRANSISTOR CIRCUIT
14 GND
13 MDRV_OUT2
12 MDRV_OUT1
11 MDRV_LOAD
10 MDRV_TURN
9 MDRV_DIR
8 MDRV_VCC
7 MDRV_PWM
6 GND
5 PHOTO_DRV
4 PRSENS_PWR
3 SPEED_SENS
2 POSITN_SENS
1 GND
CN501
TO C MAIN CIRCUIT (CN6002) ON SCHEMATIC DIAGRAM-15


I LOADING MOTOR CIRCUIT
M551
D551
SG-206S
S551
SWITCH
6 MOTOR+
5 MOTOR-
4 PHOTO_DRV
3 DISC_SENS
2 GND
1 OPEN/CLOSE
CN551
TO C MAIN CIRCUIT (CN6003) ON SCHEMATIC DIAGRAM-15

SCHEMATIC DIAGRAM-22

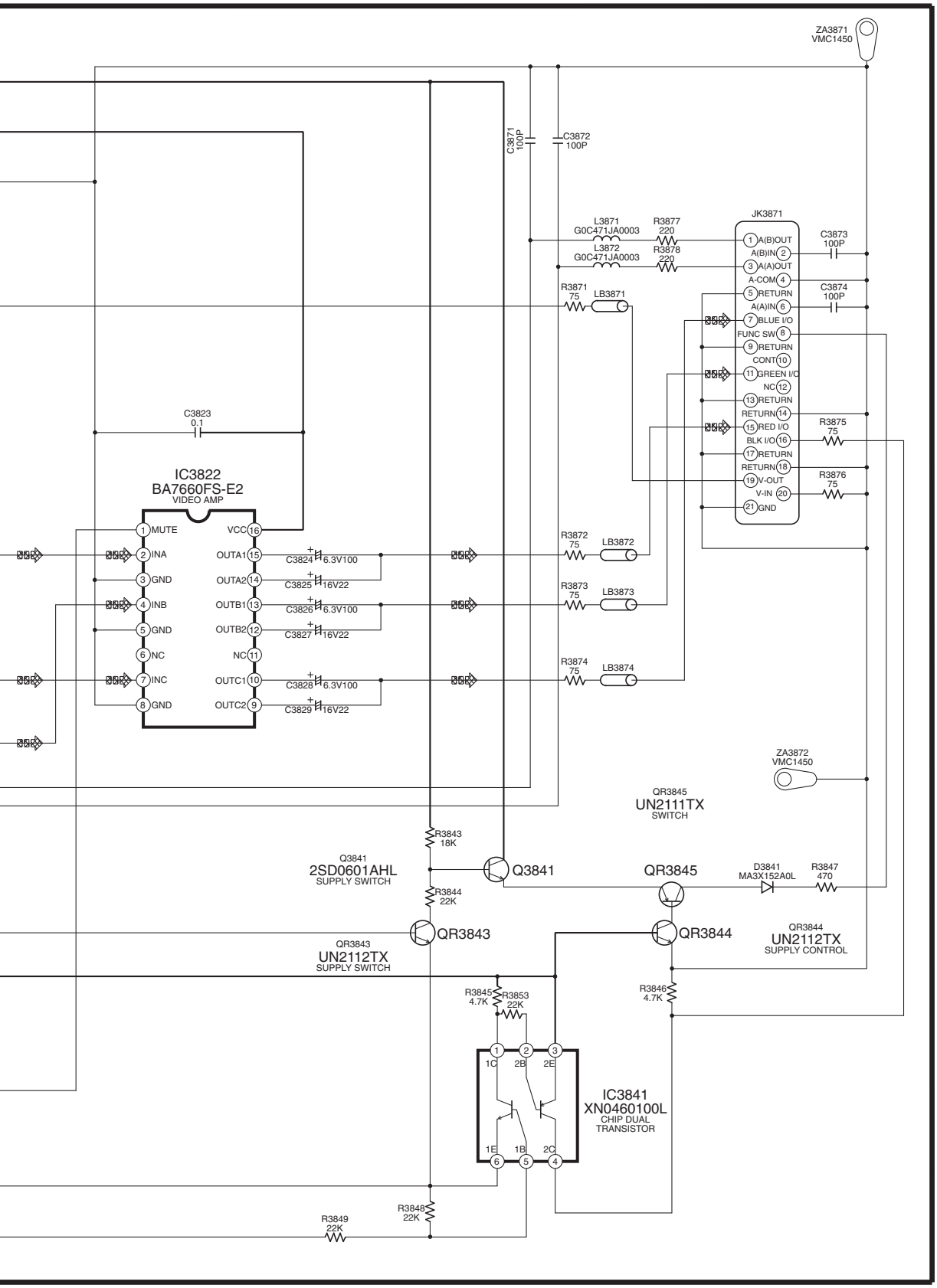
J SCART CIRCUIT

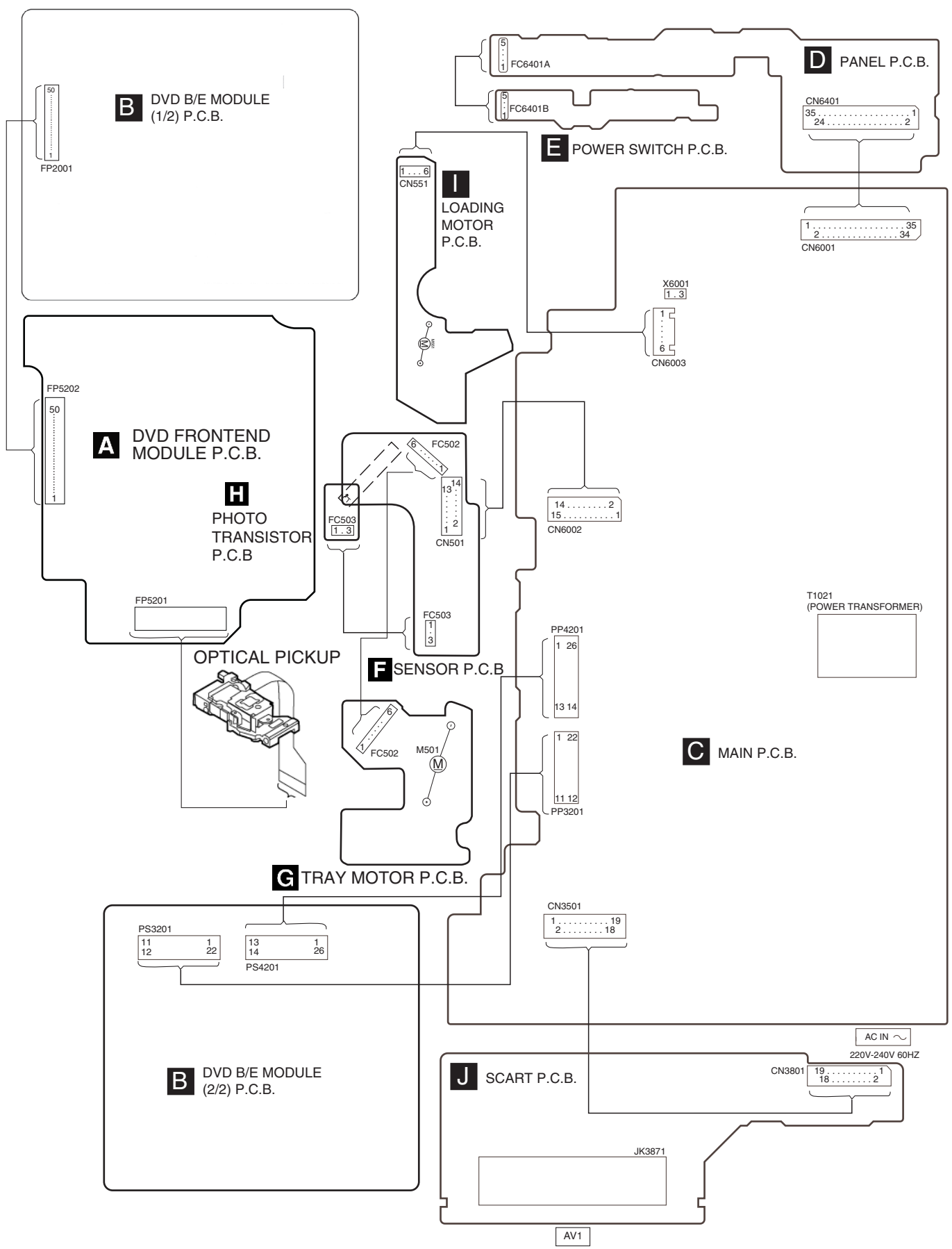
——— : +B SIGNAL LINE ▨ : DVD(VIDEO) SIGNAL LINE

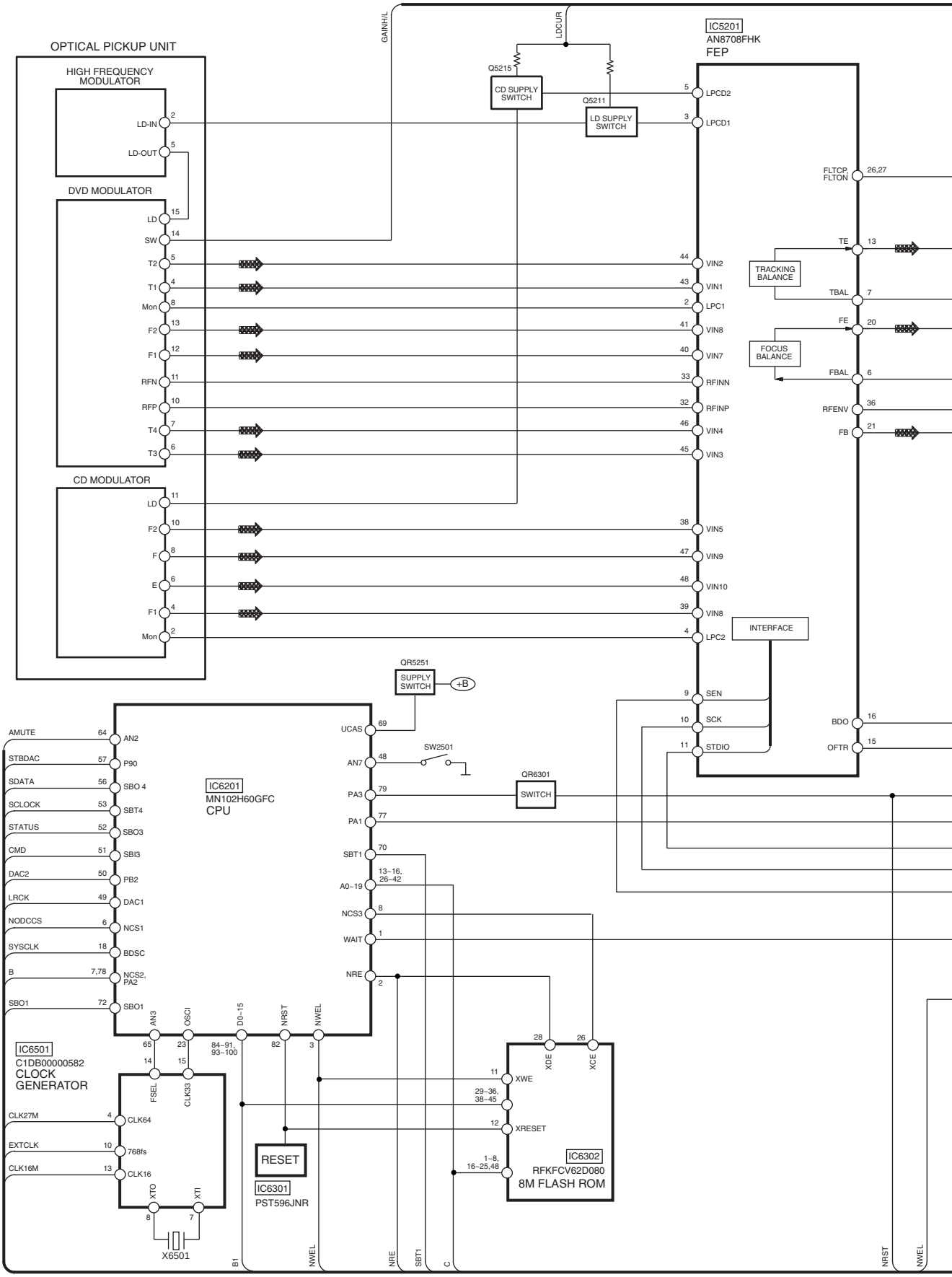


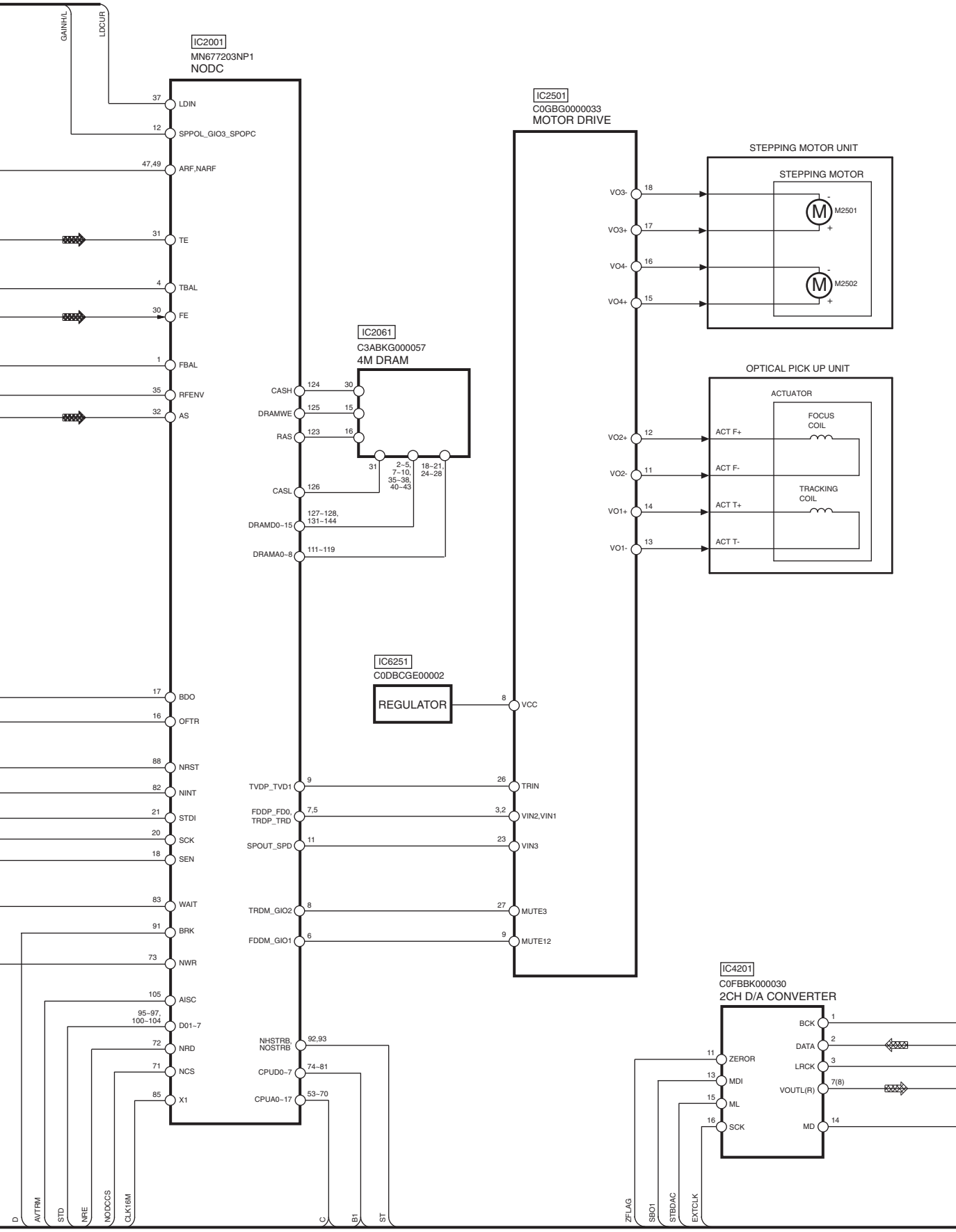
J SCART CIRCUIT

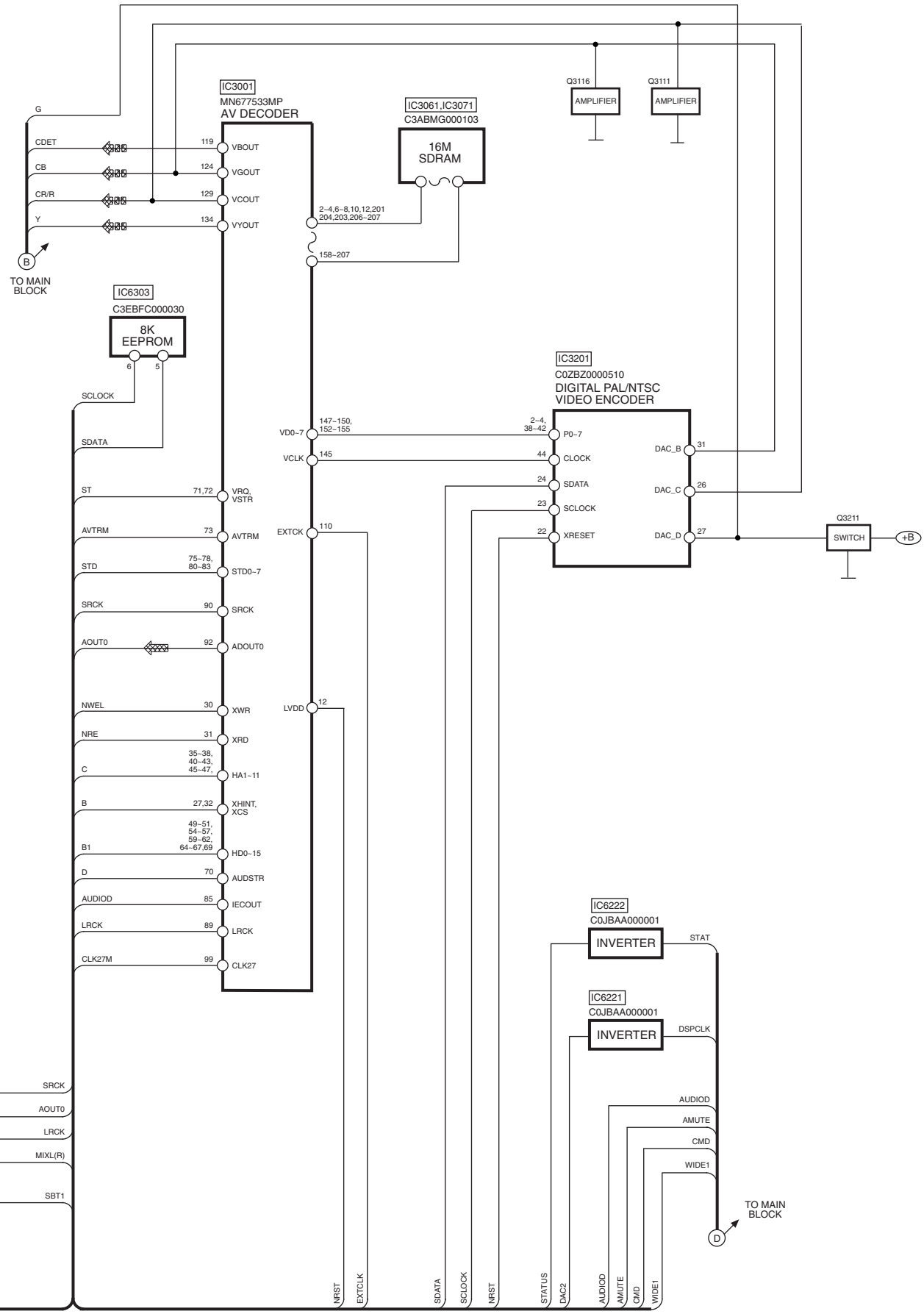
——— : +B SIGNAL LINE ⋙ : DVD(VIDEO) SIGNAL LINE

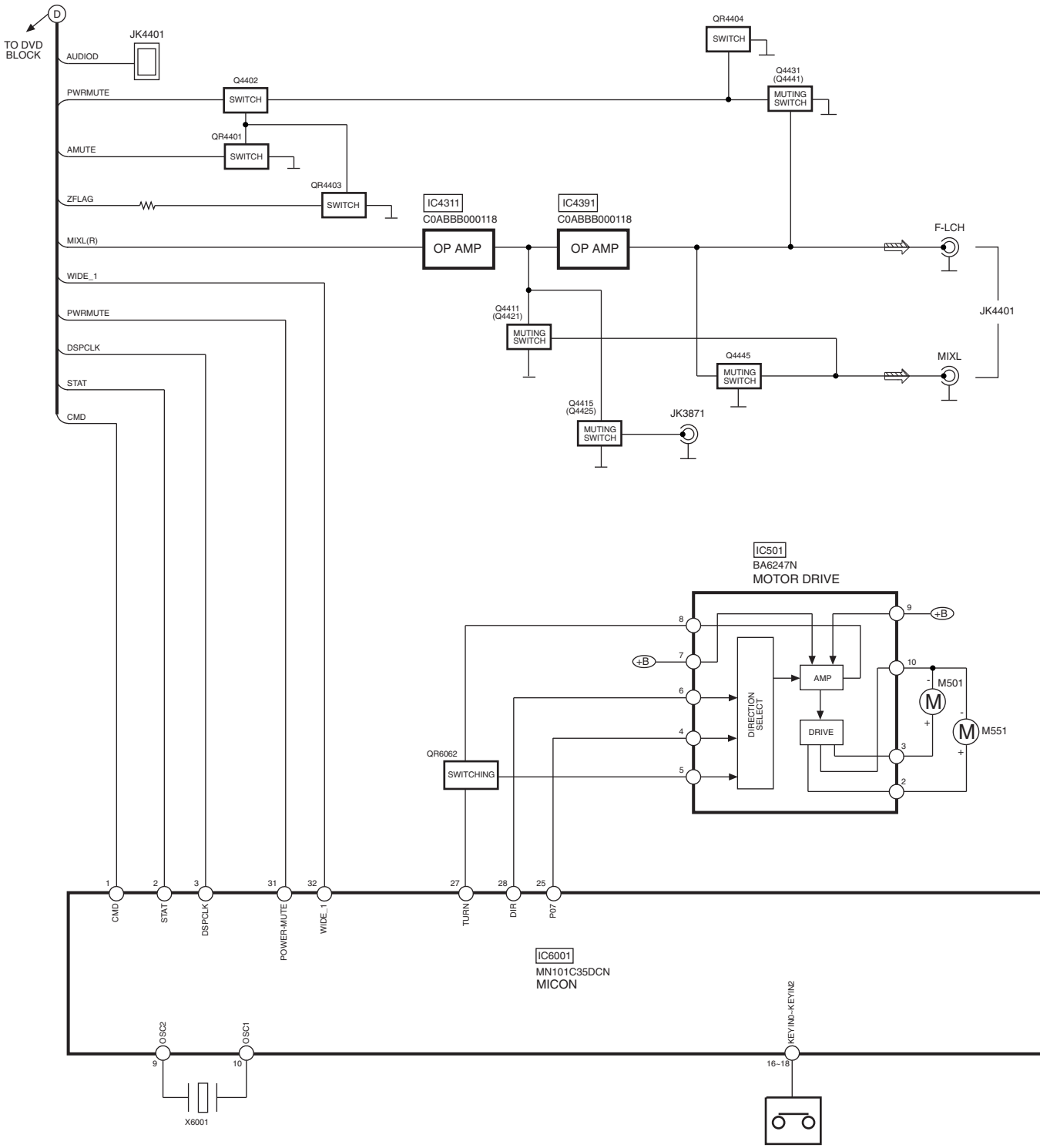


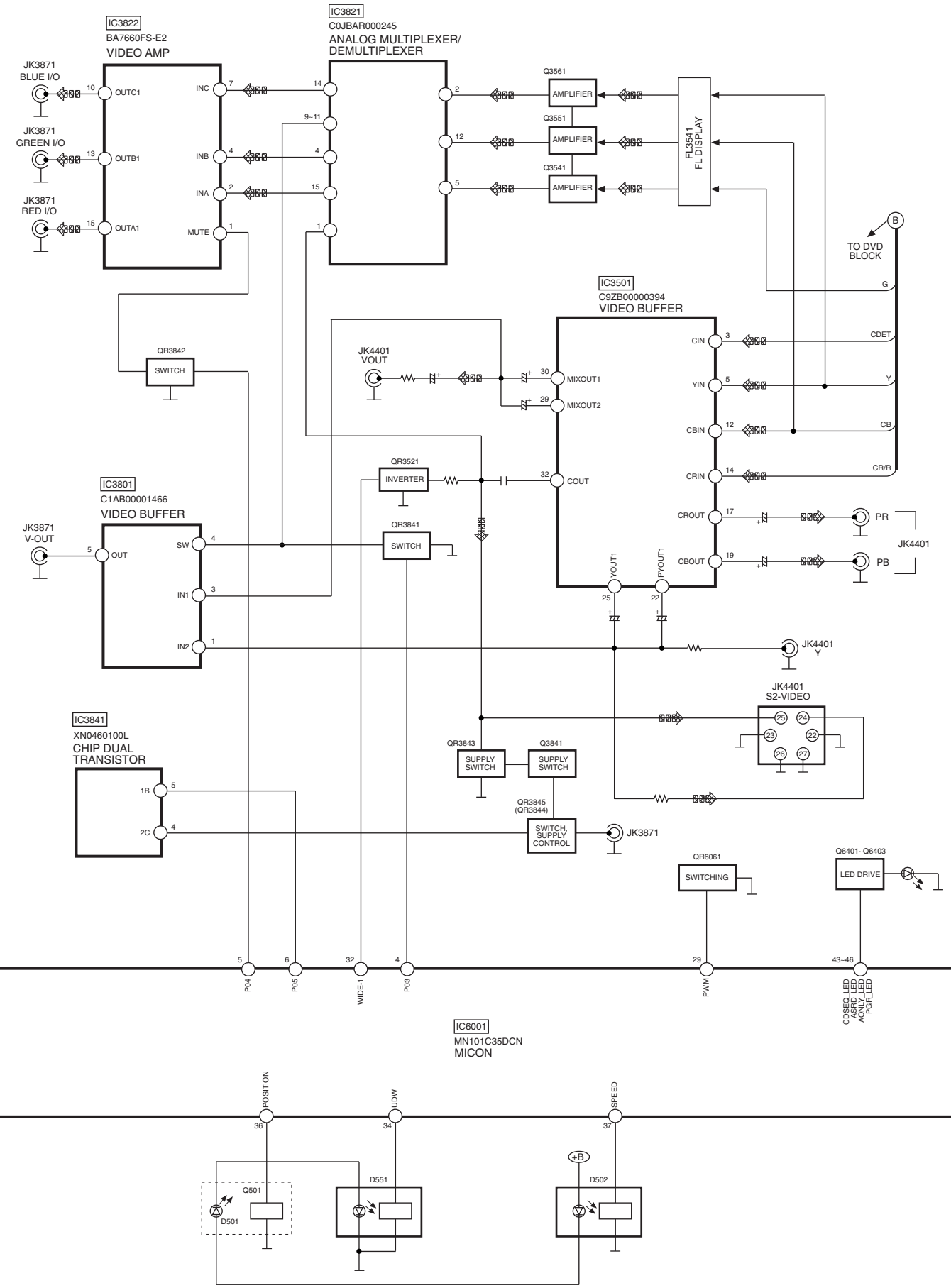

B DVD B/E MODULE (1/2) P.C.B.
FP2001
FC6401A
FC6401B
D PANEL P.C.B.
CN6401
E POWER SWITCH P.C.B.
CN551
I LOADING MOTOR P.C.B.
CN6001
X6001
CN6003
FP5202
A DVD FRONTEND MODULE P.C.B.
H PHOTO TRANSISTOR P.C.B
FC502
FC503
CN501
CN6002
FP5201
T1021 (POWER TRANSFORMER)
OPTICAL PICKUP
F SENSOR P.C.B
PP4201
M501
PP3201
C MAIN P.C.B.
G TRAY MOTOR P.C.B.
CN3501
PS3201
PS4201
B DVD B/E MODULE (2/2) P.C.B.
AC IN
220V-240V 60HZ
J SCART P.C.B.
CN3801
JK3871
AV1


OPTICAL PICKUP UNIT
HIGH FREQUENCY MODULATOR
LD-IN
LD-OUT
DVD MODULATOR
LD
SW
T2
T1
Mon
F2
F1
RFN
RFP
T4
T3
CD MODULATOR
LD
F2
F
E
F1
Mon
GAINH/L
LDCUR
Q5215
Q5211
CD SUPPLY SWITCH
LD SUPPLY SWITCH
IC5201
AN8708FHK
FEP
LPCD2
LPCD1
VIN2
VIN1
LPC1
VIN8
VIN7
RFINN
RFINP
VIN4
VIN3
VIN5
VIN9
VIN10
VIN8
LPC2
FLTCP, FLTON
TE
TRACKING BALANCE
TBAL
FE
FOCUS BALANCE
FBAL
RFENV
FB
INTERFACE
SEN
SCK
STDIO
BDO
OFTR
QR5251
SUPPLY SWITCH
+B
SW2501
QR6301
SWITCH
IC6201
MN102H60GFC
CPU
AMUTE
STBDAC
SDATA
SCLOCK
STATUS
CMD
DAC2
LRCK
NODCCS
SYSCLK
B
SBO1
AN2
P90
SBO 4
SBT4
SBO3
SBI3
PB2
DAC1
NCS1
BDSC
NCS2, PA2
SBO1
UCAS
AN7
PA3
PA1
SBT1
A0~19
NCS3
WAIT
NRE
AN3
OSCI
D0~15
NRST
NWEL
IC6501
C1DB00000582
CLOCK GENERATOR
FSEL
CLK33
CLK27M
CLK64
EXTCLK
768fs
CLK16M
CLK16
XTO
XTI
X6501
RESET
IC6301
PST596JNR
XDE
XCE
XWE
XRESET
IC6302
RFKFCV62D080
8M FLASH ROM
B1
NWEL
NRE
SBT1
C
NRST
NWEL


GAINH/L
LDCUR
IC2001
MN677203NP1
NODC
37 LDIN
12 SPPOL_GIO3_SPOPC
47,49 ARF,NARF
31 TE
4 TBAL
30 FE
1 FBAL
35 RFENV
32 AS
17 BDO
16 OFTR
88 NRST
82 NINT
21 STDI
20 SCK
18 SEN
83 WAIT
91 BRK
73 NWR
105 AISC
95~97, 100~104 D01~7
72 NRD
71 NCS
85 X1
IC2061
C3ABKG000057
4M DRAM
CASH 124 30
DRAMWE 125 15
RAS 123 16
31
2~5, 7~10, 35~38, 40~43
18~21, 24~28
CASL 126
DRAMD0~15 127~128, 131~144
DRAMA0~8 111~119
IC6251
C0DBCGE00002
REGULATOR
8 VCC
TVDP_TVD1 9 26 TRIN
FDDP_FD0, TRDP_TRD 7,5 3,2 VIN2,VIN1
SPOUT_SPD 11 23 VIN3
TRDM_GIO2 8 27 MUTE3
FDDM_GIO1 6 9 MUTE12
NHSTRB, NOSTRB 92,93
CPUD0~7 74~81
CPUA0~17 53~70
IC2501
C0GBG0000033
MOTOR DRIVE
VO3- 18
VO3+ 17
VO4- 16
VO4+ 15
STEPPING MOTOR UNIT
STEPPING MOTOR
M2501
M2502
OPTICAL PICK UP UNIT
ACTUATOR
FOCUS COIL
TRACKING COIL
VO2+ 12 ACT F+
VO2- 11 ACT F-
VO1+ 14 ACT T+
VO1- 13 ACT T-
IC4201
C0FBBK000030
2CH D/A CONVERTER
BCK 1
DATA 2
LRCK 3
VOUTL(R) 7(8)
MD 14
11 ZEROR
13 MDI
15 ML
16 SCK
D
AVTRM
STD
NRE
NODCCS
CLK16M
C
B1
ST
ZFLAG
SBO1
STBDAC
EXTCLK


IC3001
MN677533MP
AV DECODER
G
CDET
CB
CR/R
Y
119
124
129
134
VBOUT
VGOUT
VCOUT
VYOUT
B
TO MAIN BLOCK
IC3061,IC3071
C3ABMG000103
16M SDRAM
2~4,6~8,10,12,201 204,203,206~207
158~207
Q3116
AMPLIFIER
Q3111
AMPLIFIER
IC6303
C3EBFC000030
8K EEPROM
6
5
SCLOCK
SDATA
IC3201
C0ZBZ0000510
DIGITAL PAL/NTSC VIDEO ENCODER
VD0~7
147~150, 152~155
VCLK
145
EXTCK
110
LVDD
12
2~4, 38~42
P0~7
44
CLOCK
24
SDATA
23
SCLOCK
22
XRESET
DAC_B
31
DAC_C
26
DAC_D
27
Q3211
SWITCH
+B
ST
71,72
VRQ, VSTR
AVTRM
73
AVTRM
STD
75~78, 80~83
STD0~7
SRCK
90
SRCK
AOUT0
92
ADOUT0
NWEL
30
XWR
NRE
31
XRD
C
35~38, 40~43, 45~47,
HA1~11
B
27,32
XHINT, XCS
B1
49~51, 54~57, 59~62, 64~67,69
HD0~15
D
70
AUDSTR
AUDIOD
85
IECOUT
LRCK
89
LRCK
CLK27M
99
CLK27
IC6222
C0JBAA000001
INVERTER
STAT
IC6221
C0JBAA000001
INVERTER
DSPCLK
AUDIOD
AMUTE
CMD
WIDE1
D
TO MAIN BLOCK
SRCK
AOUT0
LRCK
MIXL(R)
SBT1
NRST
EXTCLK
SDATA
SCLOCK
NRST
STATUS
DAC2
AUDIOD
AMUTE
CMD
WIDE1


D
TO DVD BLOCK
JK4401
AUDIOD
PWRMUTE
Q4402
SWITCH
QR4404
SWITCH
Q4431
(Q4441)
MUTING SWITCH
AMUTE
QR4401
SWITCH
ZFLAG
QR4403
SWITCH
IC4311
C0ABBB000118
OP AMP
IC4391
C0ABBB000118
OP AMP
MIXL(R)
F-LCH
JK4401
WIDE_1
PWRMUTE
DSPCLK
STAT
CMD
Q4411
(Q4421)
MUTING SWITCH
Q4445
MUTING SWITCH
MIXL
Q4415
(Q4425)
MUTING SWITCH
JK3871
IC501
BA6247N
MOTOR DRIVE
+B
AMP
DRIVE
DIRECTION SELECT
M501
M551
QR6062
SWITCHING
1 CMD
2 STAT
3 DSPCLK
31 POWER-MUTE
32 WIDE_1
27 TURN
28 DIR
25 P07
IC6001
MN101C35DCN
MICON
OSC2
OSC1
X6001
KEYIN0-KEYIN2
16–18


IC3822
BA7660FS-E2
VIDEO AMP
IC3821
C0JBAR000245
ANALOG MULTIPLEXER/
DEMULTIPLEXER
JK3871
BLUE I/O
JK3871
GREEN I/O
JK3871
RED I/O
OUTC1
OUTB1
OUTA1
INC
INB
INA
MUTE
Q3561
Q3551
Q3541
AMPLIFIER
FL3541
FL DISPLAY
TO DVD
BLOCK
IC3501
C9ZB00000394
VIDEO BUFFER
QR3842
SWITCH
JK4401
VOUT
MIXOUT1
MIXOUT2
CIN
YIN
CBIN
CRIN
CROUT
CBOUT
CDET
Y
CB
CR/R
PR
PB
JK4401
QR3521
INVERTER
COUT
YOUT1
PYOUT1
IC3801
C1AB00001466
VIDEO BUFFER
JK3871
V-OUT
OUT
SW
IN1
IN2
QR3841
SWITCH
JK4401
Y
JK4401
S2-VIDEO
IC3841
XN0460100L
CHIP DUAL
TRANSISTOR
1B
2C
QR3843
SUPPLY
SWITCH
Q3841
SUPPLY
SWITCH
QR3845
(QR3844)
SWITCH,
SUPPLY
CONTROL
JK3871
QR6061
SWITCHING
Q6401~Q6403
LED DRIVE
P04
P05
WIDE-1
P03
PWM
CDSED_LED
AMBI_LED
AONLY_LED
PGR_LED
IC6001
MN101C35DCN
MICON
POSITION
UDW
SPEED
Q501
D501
D551
+B
D502

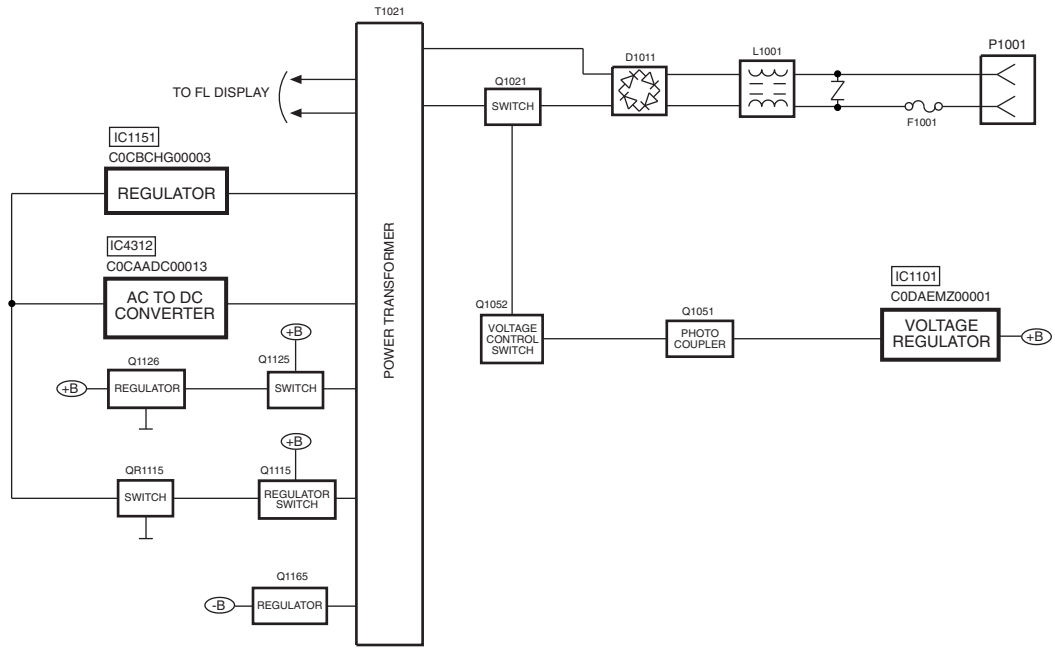
SIGNAL LINES

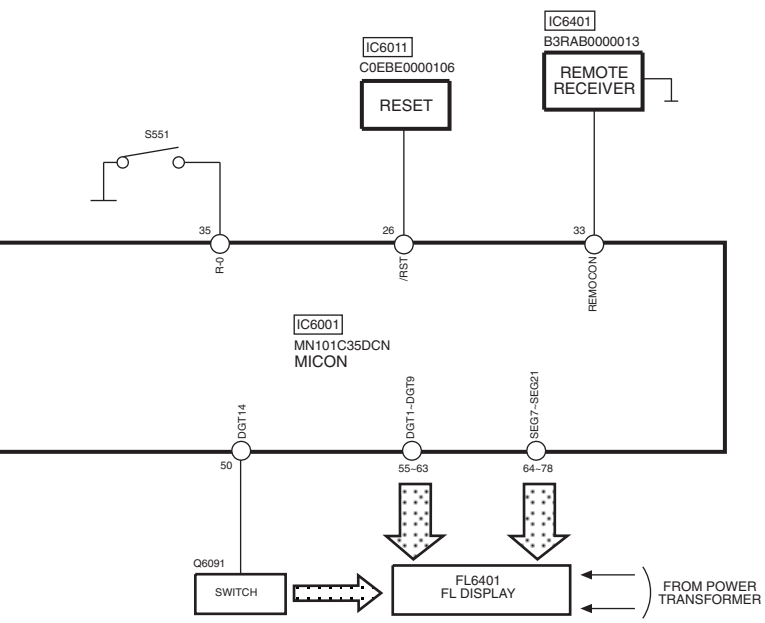
MAIN SIGNAL LINE

DVD VIDEO SIGNAL LINE

DVD AUDIO SIGNAL LINE

( ) indicates Pin No. of Right Channel

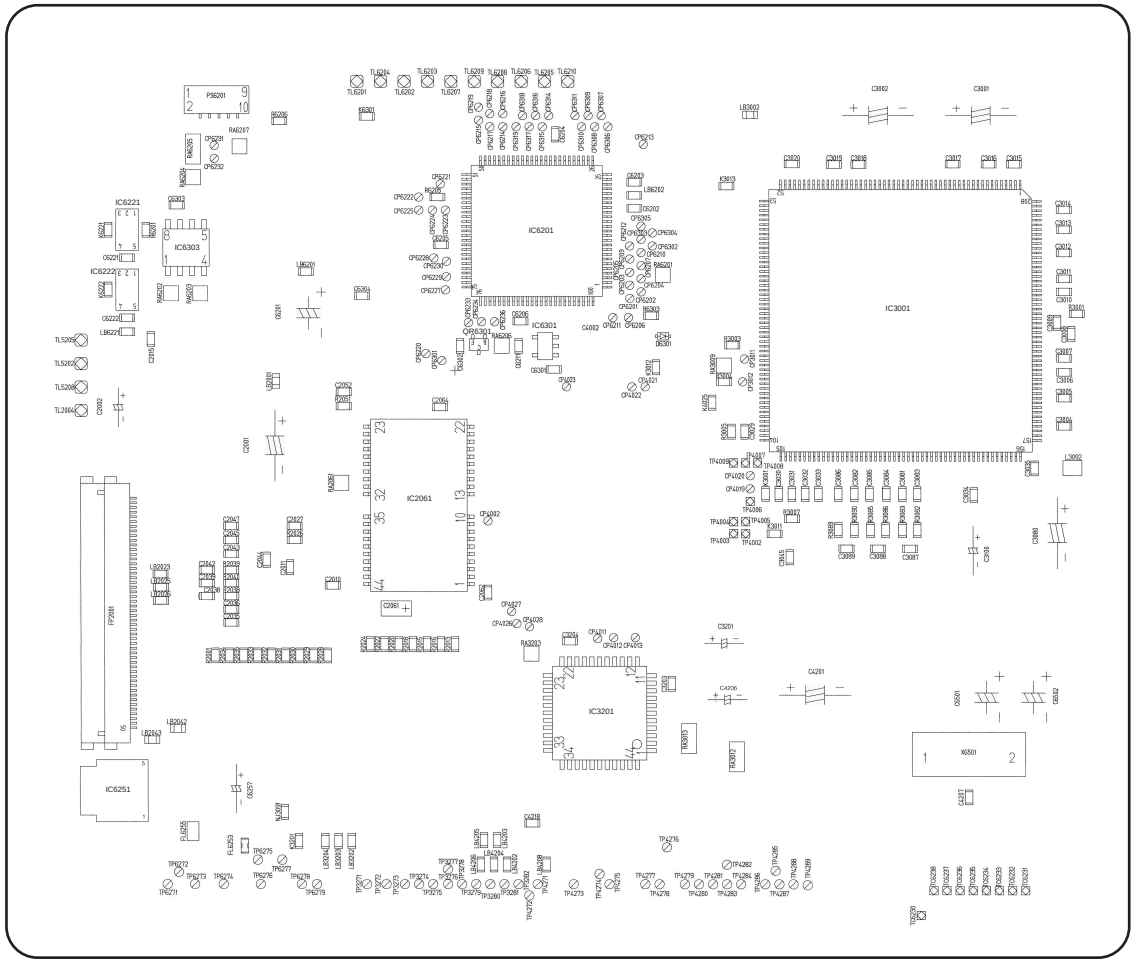




A B C D E F G

1 2 3 4 5 6 7 8 9

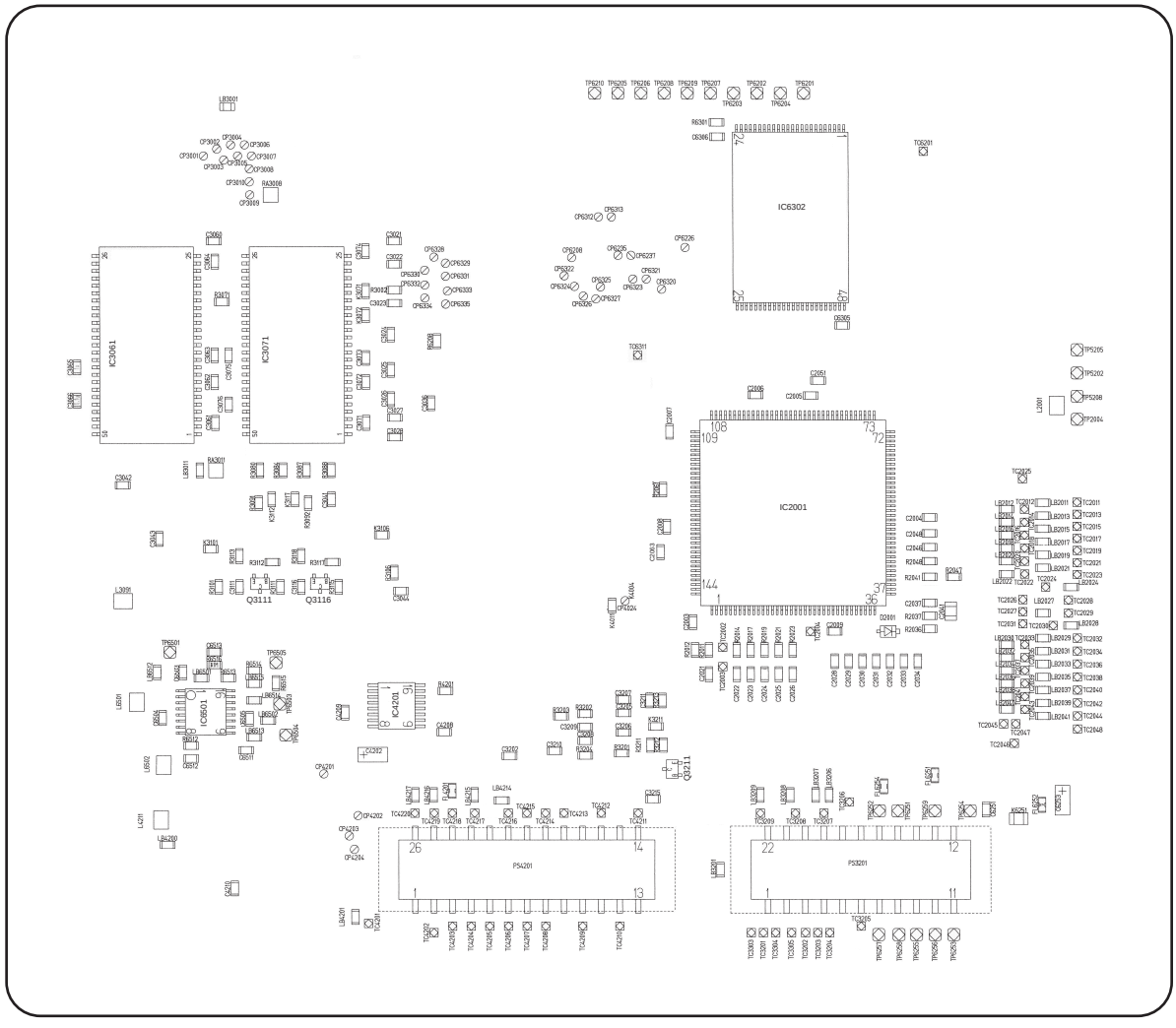
B DVD B/E MODULE (1/2) P.C.B. (REP3303V)



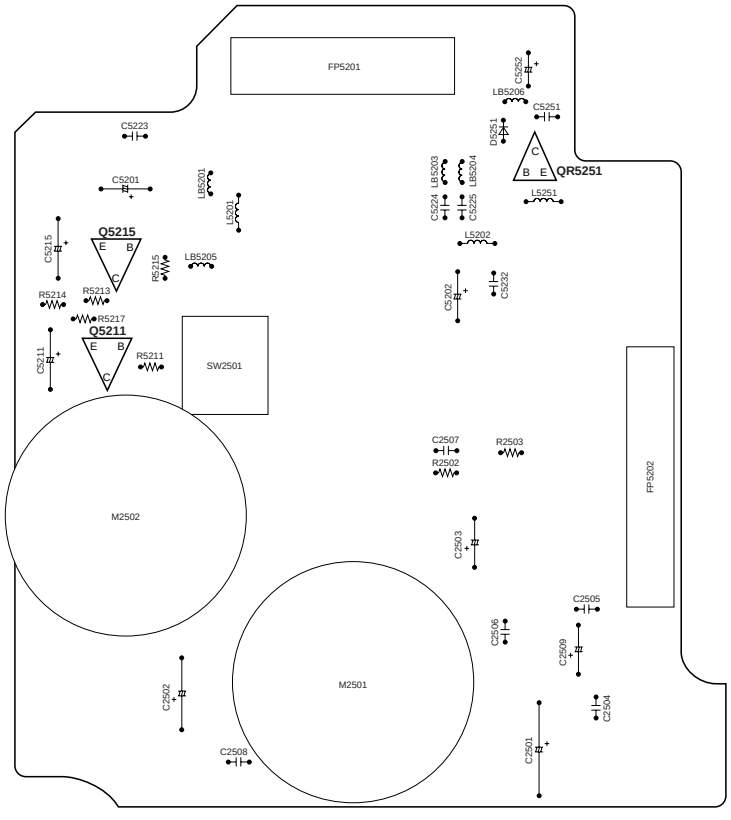
A B C D E F G

1 2 3 4 5 6 7 8 9

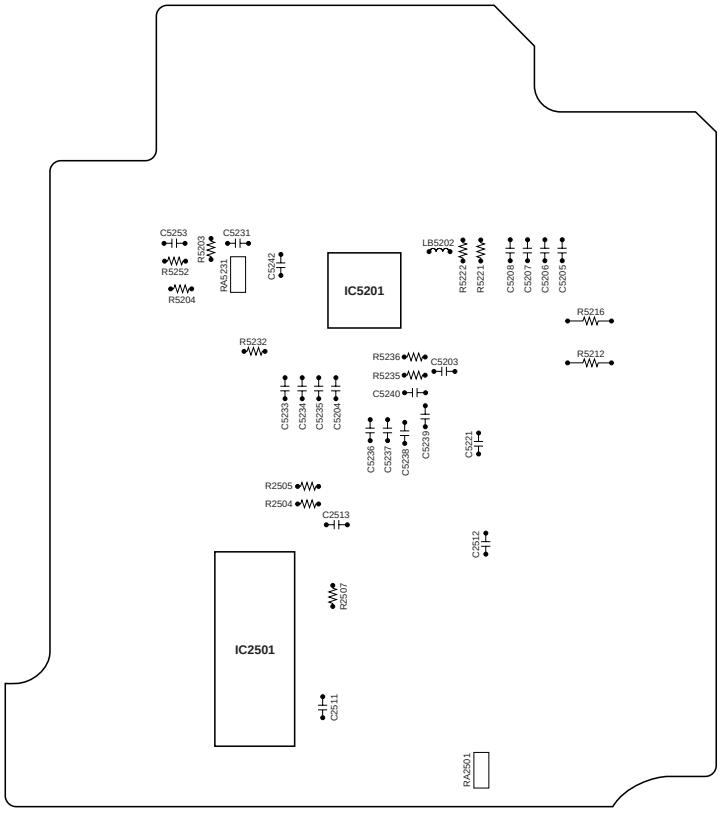
B DVD B/E MODULE (2/2) P.C.B. (REP3303V)



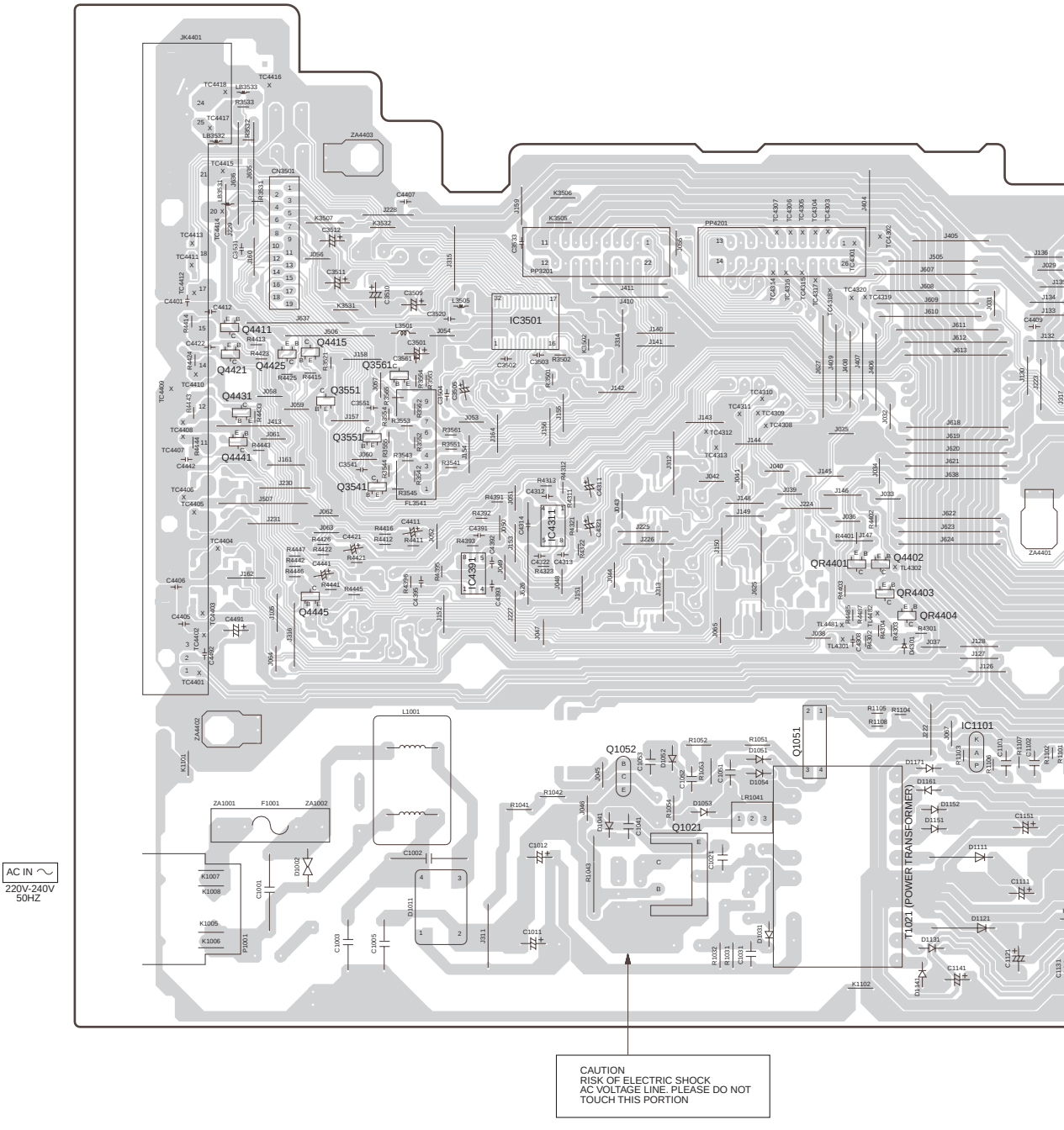
A DVD FRONTEND MODULE (1/2) P.C.B (REP3091A-N)



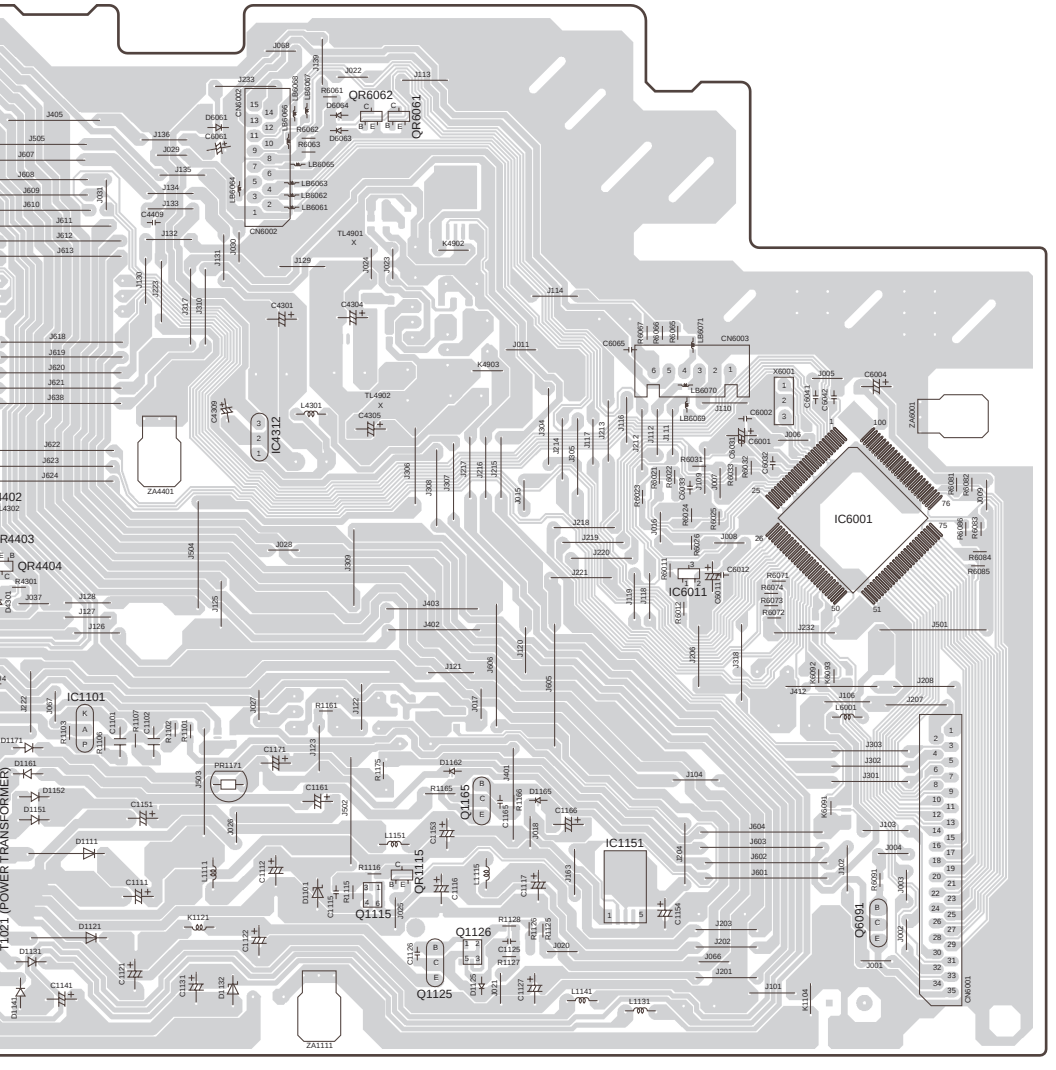
A DVD FRONTEND MODULE (2/2) P.C.B (REP3091A-N)



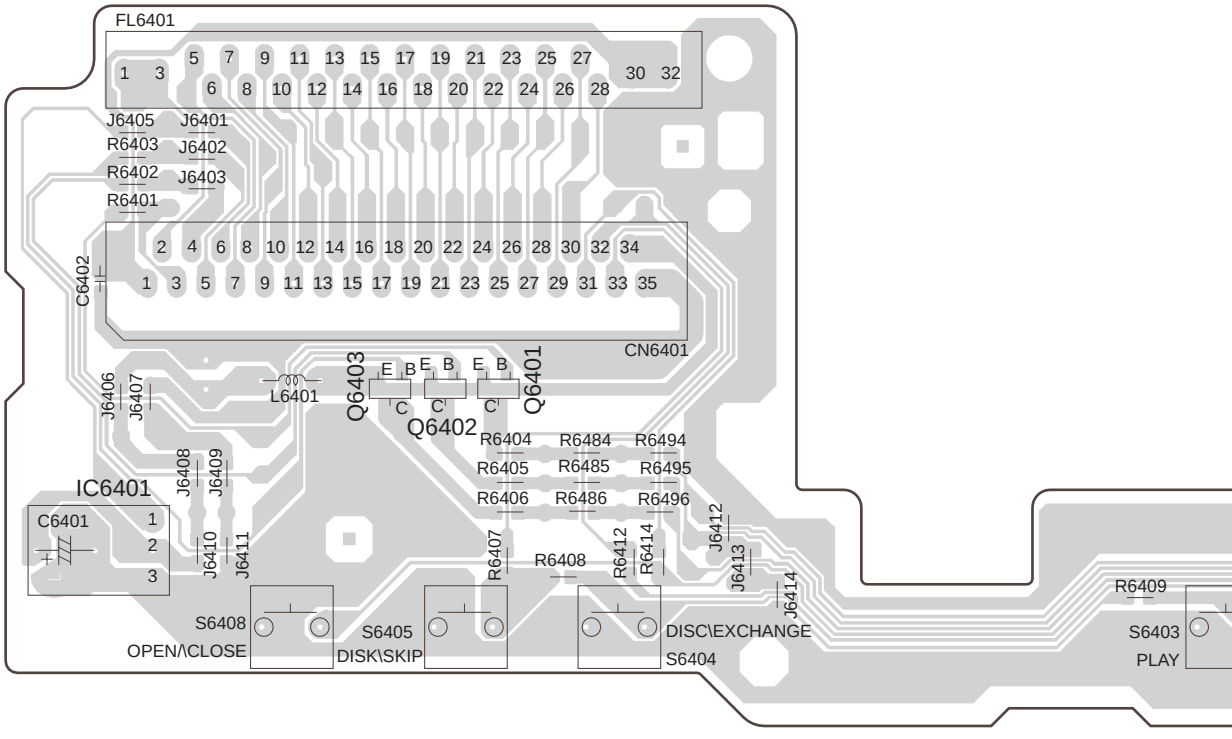
C MAIN P.C.B. (REP3374B)



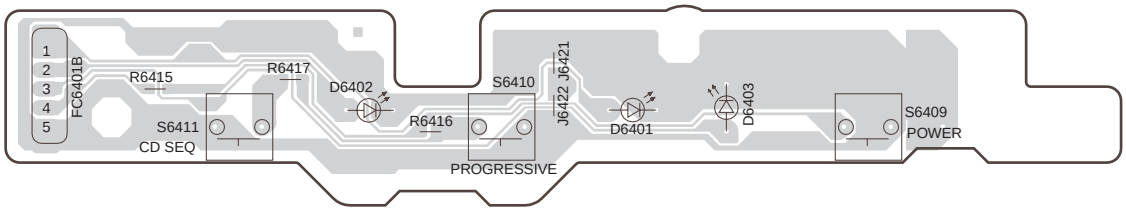
G H I J K L M

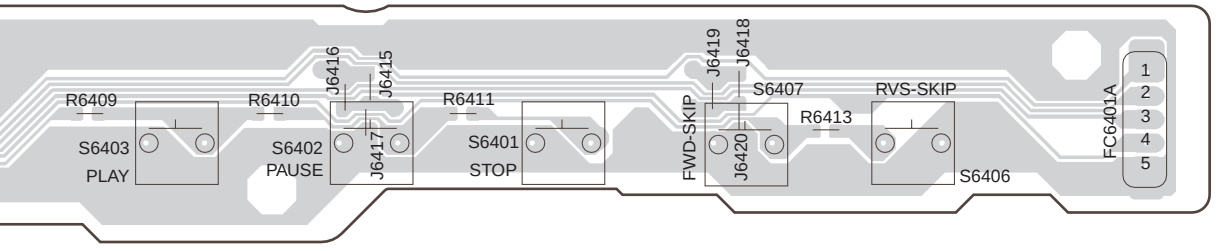

IC6001
IC6011
IC1101
IC1151
IC4312
QR6062
QR6061
QR4404
QR4403
Q1115
Q1125
Q1126
Q1165
QR1115
Q6091
T1021 (POWER TRANSFORMER)
CN6003
CN6002
CN6001
TL4901
TL4902
K4902
K4903
ZA4401
ZA1111
ZA6001
PR1171

D PANEL P.C.B. (REP3320B)



E POWER SWITCH P.C.B. (REP3320B)




R6409
S6403
PLAY
R6410
S6402
PAUSE
J6416
J6415
J6417
R6411
S6401
STOP
J6419
J6418
FWD-SKIP
J6420
S6407
R6413
RVS-SKIP
S6406
FC6401A
1
2
3
4
5